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THE "MINNESOTA" ELEVATOR.

The heavy grain crops harvested the past year have opened the eyes of elevator men to the necessity of having better and more improved facilities for handling grain. While the elevator storage capacity of this country is immense, it must be conceded that most of the houses are old, and of a type totally inadequate to the requirements of the times.

Rapid handling, at a minimum cost, is the great desideratum. For the last year or two builders of grain elevators have introduced many inventions. The old style of building is being fast relegated to the past, and new and improved methods are being introduced. The United States Patent Office reports show more patents taken out during the last two or three years for various devices for use in grain elevators alone, than for all the years previous together.

In connection with the latest improved methods of construction we present herewith an illustration of the new "Minnesota," lately erected on the Ogden Canal in Chicago.

This elevator has been critically examined by those competent to judge, and is pronounced one of the best, if not the best, general working grain elevators ever built.

The "Minnesota" occupies a ground room of 72x214, and is 158 feet high. The main building is encased by a

solid brick wall, while the cupola is covered with heavy corrugated iron. The foundation was made by driving 4,000 piles, ranging from 25 to 40 feet in length. A dock 350 feet in length connects with the dock of the Armour Elevator, and extends along the bank of the river past the "Minnesota." Two railroad tracks extend

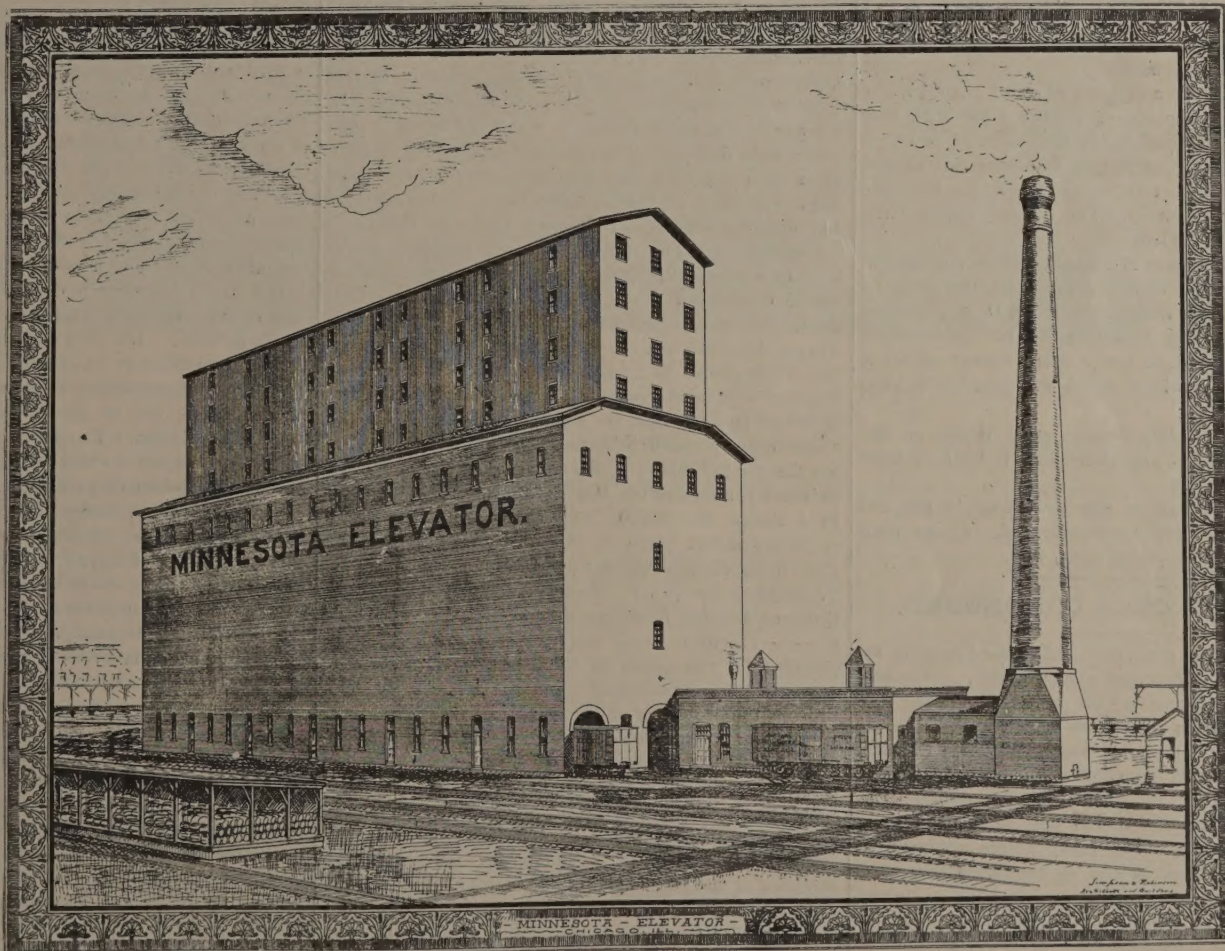
capacities of the bins range from 600 to 5,000 bushels. The cupola is five stories high and extends the full length of the building. It contains several 1,000-bushel scales and twenty-seven garnerers.

The house is equipped with two 72-inch power fans, used for dust collectors and connected with the dryers.

Ten pairs of Clark Power Grain Shovels are provided for unloading cars.

The house has sixteen legs—five receiving legs, five which may be used either for receiving or shipping, two transfer legs, each with a capacity of 7,000 bushels per hour, and four cleaner legs. These legs are all driven from a line shaft in lower part of elevator. Each leg is independent of the others and has driver with a clutch and sheave on line shaft in lower part of elevator greatly reducing cost of construction, maintenance and fire risk. No shaft longer than seven feet is in the cupola, and each runs in no more than two boxes and these are oscillating self-oiling boxes,

requiring no attention. This system of driving elevators is patented, owned and controlled by Simpson & Robinson. Rope transmission of power is here carried out as fully as its most ardent advocates could desire. The Minnesota contains the largest and most successful plant of rope drives in the world. The house contains twenty-one rope drives, ranging from 550-horse power to 2-horse power. The main drive is 550-horse power transmitted from a sixteen feet twenty-two



through the elevator, and the water at dock is deep enough to permit the largest lake vessels being loaded there.

The principal things to be secured and which were kept constantly in mind by the architects were, rapid handling, minimum power, small working crew, and superior results. The architects and builders have carefully carried out these most desirable results.

The house contains 154 bins, each fifty feet deep. The

groove wheel on engine shaft to the line shaft with one continuous rope of twenty-two strands of $1\frac{1}{4}$ inch long fiber tallow laid manila.

Seven bins and fourteen loading spouts are provided for loading vessels and ten for loading cars. The spouts are iron down spouts fitted up with bifurcated spouts. Simpson & Robinson's special telescopic fire proof boots are alone used.

Two belt conveyors under the work floor of elevator extend entire length and are so arranged that grain can be drawn from any bin in the house and elevated by any leg in the house except the regular receivers. One of these belts is driven with a double reversible rope drive and fitted up with stationary trippers, so that grain can be drawn from any bin on that side of the house, conveyed to and elevated with any one of the transfer or shipping legs. These belt conveyors on lower floor are so arranged that when the house is working to its full capacity grain can be drawn from any bin in the house, conveyed to, elevated and shipped with the two specially large elevators and scales without in any way interfering with the working of the house. Two reversible belt conveyors are located on the bin floor, so arranged that grain can be elevated with any leg, drawn from any scale in the house, and put in any bin in house with one handling.

The power plant was selected with care, and is fully equal to any demands that may be made upon it. The engine house is a 35x24-foot brick structure, while the boiler room is 35x32 feet. The brick smoke stack is fifteen feet in diameter at base, and 157 feet high. The engine is a 28x54 Hamilton Horizontal Condensing Engine. There are three 72-inch by 20 feet Otis Steel Boilers, fitted with mud drums, steam drum and steam trap, Blake Feed Pump, Dean Condenser, Jewel Filter, and in fact everything that goes to make up a perfect modern steam plant. Duplex fire pumps, with stand pipe, reels, and hose, lavishly distributed throughout the building, give ample fire protection.

The whole is lighted by 150 incandescent electric lights from an electric light plant of sufficient capacity to supply as many more if needed.

The "Minnesota" has a capacity of about 750,000 bushels of grain. It is capable of receiving 150 cars, and loading out 100,000 bushels in ten hours. The house is as perfect as money and human ingenuity could make it. Money was not spared to make this house the Banner elevator of the country. The owners' wishes have been carried out to the letter.

Simpson & Robinson of Minneapolis, Minn., architects and builders of grain elevators, furnished the plans in detail, and all bills of material, and Mr. D. A. Robinson of this firm personally superintended the construction from beginning to end, in every detail, except selecting and locating the machines, which was done by the present superintendent.

The building certainly reflects great credit on the designers and builders, and places them in the front rank in this line of business.

This mammoth structure was completed in just 100 days from the time work was commenced. At one time 406 carpenters were employed upon it.

THE CORN CROP CONDENSED.

The corn crop is condensed and reduced in bulk by feeding it into an animal form more portable. "The hog eats the corn and Europe eats the hog." To fatten this animal, at least fifteen bushels are required, and according to arithmetic the hogs that were received in Chicago last year brought with them 36,840,892 bushels of corn! And they in large part did their own harvesting. The writer had not understood this so well as he does since the other day, and doubtless many others are ignorant as he was. On a farm in one of the lower tiers of counties of Wisconsin the writer has seen 400 hogs turned into a wide field of ripened corn and divide and subdivide themselves into companies of a dozen, more or less, and then attack the hanging yellow ears, leaving not one as they worked themselves down the long rows. At the end of these, the owner said, they would turn again and attack other rows, and return upon them in equal order, and so continue doing day after day until the stripped stalks would be all that was left. The brute hog is no fool, whatever may be said of the human variety.

Corn is grown in Indiana at an estimated cost of less than 15 cents per bushel.

LIABILITIES OF WAREHOUSEMEN.

The liability of country grain warehousemen is a source of constant argument and many lawsuits because the country warehouseman usually conducts his part of his business so loosely. Warehouse men at central markets are very careful to have every fact and condition of the transaction recorded, while those who receive grain for storage in the country frequently make no record of the transaction. It often happens that the warehouseman and the owner of the stored grain understand the conditions of the transaction differently. When the agreement is put in writing, as it should be, little excuse can be found for a misunderstanding. When a grain grower finds that he will increase his chances for collecting for his grain by claiming that he understood the transaction differently from the warehouseman, he will invariably claim to have so understood it. To avoid this give a written receipt in which all conditions are plainly stated.

We take the following statement of the case of *Irons vs. Kentner*, which was appealed to the Supreme Court of Iowa, from the *Northwestern Reporter*:

Where a warehouse receipt reads "Bought * * * at owner's risk of fire" a certain quantity of wheat, and it is shown by parol evidence that it was the custom to mix the wheat, and return owner's wheat of like quality, and to charge storage when the wheat remained in the elevator more than one month, but that this particular wheat was kept in a separate bin, and that the warehouseman offered to purchase it from the owner a few days before it was destroyed by fire, but he refused to sell, the warehouseman will be held to be a mere bailee of the wheat, and not its purchaser.

Appeal from Circuit Court, Tama county.

Action against C. H. Kentner to recover the value of wheat deposited by plaintiff and one Armstrong, who subsequently assigned his interest to plaintiff, in defendant's elevator, and there destroyed by fire without defendant's fault. The receipt given Armstrong and plaintiff when the wheat was delivered was as follows: "Bought of T. K. Armstrong, for C. H. Kentner, to be delivered at his elevator, according to sample, wheat No. 3, at owner's risk as to fire." A memorandum of the quantity of wheat was on the back of the receipt. It was admitted at the trial that it was the custom to mix wheat when delivered at the elevator, and return owner's wheat of like quality, and to charge storage when the wheat remained in the elevator more than a month. Judgment for plaintiff. Defendant appeals. Reversed.

Rothrock, J. The question we are required to determine is whether the transaction between the contesting parties constituted a sale of the wheat or a mere bailment. The evidence shows that the wheat in question was not deposited in a common bin with other wheat, but that it was placed in a separate bin, where it remained unmixed with other grain until it was destroyed by fire. It further appears that no demand was made for the wheat by the plaintiff or Armstrong previous to the fire, but that the defendant, by his agent, offered the plaintiff 95 cents per bushel on the Saturday before the fire. In *Johnston vs. Browne*, 37 Iowa, 200, the ticket or memorandum given by Browne on receiving the grain in the elevator was in these words: "Bought of H. T. Pickett, for W. P. Browne, to be delivered at Browne's elevator, if all like sample — of wheat, at \$ —, in store, — buyer, — bushels, — pounds." It was shown in that case, by extrinsic evidence, that the understanding of the parties was that Browne, the proprietor of the elevator, was to ship and sell the grain on his own account, and when the depositor desired to sell, Browne was to pay the highest price for the grain, or return a like quantity and quality. That transaction was held to be a sale, and not a mere storage or bailment of the grain. In *Nelson vs. Browne*, 44 Iowa, 455, the ticket or memorandum delivered to the depositor of the grain was in these words: "Received of C. C. Cowell, for Thompson in store, for account and risk of C. C. Cowell, 183 bushels No. 3 wheat. Loss by fire, heating and the elements at the owner's risk. Wheat of equal test and value, but not the identical wheat, may be returned." It was held in that case that so long as the wheat remained in the elevator, though thrown in a common bin with wheat of like quality, the transaction was a mere bailment. It is there said: "But the warehouseman is not under obligation to retain the wheat of the depositor in his warehouse. He may, without breach of contract, and without being guilty of conversion, ship the wheat away on his own account. When he avails himself of this privilege, the character of the transac-

tion and the relation of the parties change." In the case at bar the ticket or memorandum expresses no completed contract upon its face. In this respect it is unlike the contract in *Marks vs. Elevator Company*, 43 Iowa, 146, where it was held the contract could not be explained by parol evidence, because it was complete in its terms. In this case no action can be maintained upon the instrument without the aid of extrinsic evidence. Parol evidence is necessary to fix the price agreed to be paid if it should be held to be a contract of sale, and whether a sale or mere bailment, parol evidence is necessary to explain the figures indorsed on the instrument. It was admitted the grain was delivered in pursuance of the alleged custom or usage, and it was shown that it was in the elevator in a separate bin when it was burned, and that the defendant offered to purchase it on the Saturday before the fire. These facts, when taken in connection with the ticket, show clearly that the transaction was not a sale, but a bailment. It is true that the word "bought" in the ticket, unexplained, would import a sale, but when taken in connection with the expression "at owner's risk of fire," and in the light of the parol evidence, it clearly appears that a sale was not contemplated by the parties. "At owner's risk of fire" evidently means that, so long as the wheat should remain in the elevator, the plaintiff should bear that risk. If it was a sale, it is not at all probable that any such words would have been used. In such case the warehouseman would have assumed the risk without any stipulation to that effect.

We think the case is clearly within the rule of *Nelson vs. Brown*, supra, and that, as the identical wheat remained in the elevator and was consumed with it, the defendant is not liable. Reversed.

INTERESTING WHEAT EXPERIMENTS.

The most extensive and varied experiments in the culture of the wheat plant that have ever been made in this country have been conducted by Mr. E. S. Carman, editor of the *Rural New Yorker*. These began as far back as 1878 with efforts to obtain and plant small plots of all the best kinds of wheat known both at home and abroad. From first to last about 150 different varieties were tried, of which all the foreign ones proved inferior or worthless. Of all the wheats tried, Armstrong (now sold as Landreth) was chosen as the mother plant for crossing. For several years an effort was made to change spring to winter wheats, but though a few plants would survive mild winters, all were killed by a severe winter.

The most interesting part of Mr. Carman's work has been in the crossings of wheats and the production of rye wheat hybrids. His early experiments in this line were far from satisfactory, and usually quite discouraging. The progeny seemed to be a reproduction of the mother. As a rule, little can be known of the value of a cross-breed the first year. The plants generally resemble the mother. The seeds sown from these crosses, however, produce plants that vary considerably or decidedly. Of late years his wheat crosses and hybrids (wheat-rye) have so multiplied, as the result of crossing every year, that only a few heads of those seemingly the best are selected for future culture. All others are destroyed, their numbers reaching into the thousands. Of six varieties from the first of the crosses and hybrids to become fixed, samples were sent out last year to farmers in various sections of the country for trial. From these a great many reports have been received, and most of them favorable beyond all expectations.

Mr. Carman now says: "For several years but little hope was entertained that anything of much worth would come out of the rye-wheat cross. It is different now. As they have been further crossed and selected, there is good reason for the belief that these hybrids will have an emphatic effect in changing the distinctly wheat and rye area of the country. The wheat crosses and rye-wheat hybrids are again in the ground. Only those which seem to promise excellence in all or some respects were retained — about seventy-five in all; the rest were, as in years past, destroyed. We have now greater hope for the future of the rye-wheat hybrids than for the wheat crosses, though among the latter are several varieties that yield more than any of the known kinds which have been tried at the Rural Grounds under the same conditions."

A shortage in broom corn has caused the broom manufacturers to agree on an advance in the price of the finished article.

BRANDON, THE CENTRAL WHEAT MARKET OF MANITOBA.

Situated on the main line of the Canadian Pacific Railroad 133 miles west of the city of Winnipeg, is the city of Brandon, now widely known as a great grain market. It was not until 1879 that the first sod was broken in that part of the province of Manitoba tributary to the market of Brandon, and yet, during one year since that time, over one million and a half bushels of grain were marketed from farmers' wagons and sleighs.

The accompanying cut will give a pretty fair idea of the crowded state of that busy little town's wheat market. Before, however, entering into statistics of grain deliveries, we will give our readers a few facts about the city. The site is a very beautiful one, particularly when compared with some of the towns of level prairies. The main portion of the present site is on the southern bank of the Assiniboine. This bank rises in a gradual slope from the river to a distance of a mile and a half before the level prairie is reached. There are nine sections, or three miles square, laid out in lots, and although there was not a house on the present site prior to the summer of 1881, there is now a very beautiful city built thereon.

Some of the buildings, both public and private, are not only very fine, but were built at considerable cost. During the season just closing the very best St. Louis red brick were imported into the city for building purposes. There are three chartered banks in the city, the buildings for which are very fine; also two private banking establishments. Some of the business blocks on the main streets are very fine, and would do credit to a much older and more pretentious city. During the past season no less than one hundred and sixty new buildings were built in the city. Some of these were private residences of some of the grain merchants whose names appear in this article. The cost of the buildings and public improvements last year amounted to \$460,000. The population, according to a census taken during the first week of last November, was about 5,000 souls.

Until within a few years past a very large territory was tributary to Brandon, and farmers had to drive long distances to market their grain at that point. The building of elevators at stations along the main line of the Canadian Pacific Railway, the building of a branch line in a southwesterly direction by the same company, and the further building of a branch line by the Northern Pacific in southeasterly direction from the city, cuts off a great deal of this territory. Yet Brandon holds its own as the largest wheat market in the Province. In 1887 an unexpectably heavy crop of wheat was taken off, and there was as before stated over one million and a half bushels of wheat marketed in the city. In 1888, a year of general drouth, the deliveries fell to 695,000 bushels. In 1889 a great part of the crop of the Province was injured by frost, and yet the deliveries of exportable wheat at Brandon was over 900,000 bushels. In 1890, a normal year, with some very heavy yields in favored localities, the deliveries amounted to a little over 1,000,000 bushels. Up to Saturday, December 12, the deliveries of the 1891 crop amounted to 450,000 bushels, and there are scores and scores of farmers who have not yet threshed.

Very little other grain except wheat has been shipped until last year, when over two hundred cars of oats were shipped to the East. This year about forty cars of the same grain have been shipped. Little attention has hitherto been paid to the raising of barley, and of that raised very little has been sent out of the Province.

For the handling of the grain delivered at Brandon there are nine elevators and several warehouses, the united capacity of which slightly exceeds 400,000 bush-

els. There is but one flouring and oatmeal mill in the city, but this, which has a capacity of 500 sacks of flour and 200 sacks of meal, is kept running night and day. The principal foreign market for the flour of this mill is Scotland, although some has been shipped to China and Japan.

Hitherto the farmers of the district have made Red Fyfe wheat the principal part of their crop. Owing to its taking longer than some other varieties to ripen there is now a disposition on the part of most farmers to turn to some other variety. The Experimental Agricultural Station for the Province, which is located at Brandon, has been trying a great many varieties for the past two or three seasons, and the manager thinks he has at last succeeded in acclimatizing one of the East Indian varieties that will completely fill the bill. This variety is called the Calcutta hard, and has proved itself for the past three years to be fully from ten to fourteen days earlier than the Fyfe. It has also much improved both in appearance and hardness since its transplantation to this northern climate.

The following persons and companies have buyers on the Brandon market: Messrs. Alexander, Kelly & Co. (millers), Robert F. Edgar, Kenneth Campbell, D. H. McMillan & Co., Thomas Thompson, W. H. Greer, At-



THE GRAIN MARKET AT BRANDON, MAN.

kinson & Cummings, F. B. McKenzie, Smart, Darragh & Co., Parrish & Lindsay, A. E. Rea, Gray & Davidson, Oglvie & Co., and the Manitoba Elevator Company.

LOVE ECLIPSES THE GRAIN MARKET.

A young man and a good-looking young woman climbed the stairs to the visitors' gallery of the Chicago Board of Trade recently. They took seats well down in front near the rail and regarded the animated scene on the floor below with a great deal of interest. Eventually the young man grew more absorbed in surveying the young woman than in watching the busy brokers, and, forgetting his surroundings apparently, he slipped his arm around her waist and whispered pleasant words in her ear. At least that is the way it looked to a broker on the south side of the wheat pit.

The "tip" went round the pit like a flash, a thousand faces turned toward the gallery, and a thousand pairs of eyes took in the situation. The couple in the gallery were unconscious of the attention they were attracting until brought back to life by the chorus of yells that rose from the pit. "Hi-hi-hi-hi-i! Break away! Come off! Well, well! Will you ever let go! Whoop!" Brokers danced up and down in the pit, threw their hats into the air, and swung their arms wildly.

The young man's arm snapped away from the young woman's waist, the crowd cheered lustily, and trading, which had entirely stopped for sixty seconds, was resumed.

A bushel of grain in Great Britain is now figured as containing sixty pounds instead of sixty-one.

LOANS ON GRAIN IN RUSSIA.

Some time ago Secretary Blaine instructed Mr. J. M. Crawford, our consul-general at St. Petersburg, to investigate and report the operations of the system in Russia in which farmers are loaned money on such grain as they may store in warehouses. The report has been made public. It is as follows:

In obedience to instructions from the department, I have prepared the following report upon the system now in practice in Russia of making advances on farmers' grain stored in warehouses or delivered to officials of the several railroads of the country. Inasmuch as the rules and regulations touching this important question are not published for public distribution, I am indebted to the imperial Minister of Finance for an official copy of the "Laws Governing Advances on Cereals on Account of the Imperial Bank of Russia," from which I have been courteously permitted to make the following summary for the use of the department:

(1) Advances on grain may be made by any railway company authorized by the imperial Ministry of Finance. (2) The amount to be advanced is in direct ratio to the price current for cereals at the nearest market place, and must not exceed 60 per cent. of the value of the grain as

thus estimated. In case the loan is granted for a period of six weeks or less, an advance of 80 per cent. of the estimated value may be obtained.

(3) The rate of interest on these loans is fixed by the Imperial Bank, and is usually 6 per cent., varying, however, a little from this rate according to the condition of the grain and the nature of the security. This interest is paid in advance and for the length of time it has been actually granted.

(4) In addition to the regular interest, as above stipulated, the borrower is charged: (a) 2 per cent. per annum for a sinking fund, but the percentage for the sinking fund must not exceed one-third of 1 per cent. of the total loan; (b) a sum not exceeding one-third of 1 per cent. as remuneration to the rail-

way company for the trouble of negotiating the loan.

(5) Loans are granted usually for six months, or without fixing the time in advance; but loans may be made for a longer period, as the necessity of the case demands. In the latter case the loan must be settled not later than one year from the date thereof.

(6) The owners of the grain stored in the warehouses, or their legal representatives, are entitled, under the control of the railway company's agent, to inspect the grain from time to time, and to take measures in order to protect the same from being damaged, or to demand that such measures be taken by the railway company on their account. In case of need, the railway company may take these measures on account of the owner, without being requested by the latter, and charge the expenses thereof to the owner.

(7) The natural loss in weight resulting from the above operation is fixed by the regulations issued by a council of officials appointed by the several railway companies.

(8) The grain is returned by the railway company on repaying the advances made and other charges, as mentioned above.

(9) If the sum advanced is not repaid when due, and there is no good reason to grant an extension, the grain is sold by the railway company at public auction.

(10) Such scale may be made imperative under the following circumstances and regulations: (a) If the stored grain shows signs of being irreparably damaged; (b) if the fear is entertained that the value of the grain stored in warehouses cannot cover the charge for storage, the amount advanced, and other expenses. The receiver of

the loan must, in all cases, be informed at least seven days in advance of the date of sale.

(11) The railway company, after deducting the expenses of the public sale, covers all its own charges, *i. e.*, the amount advanced, charge for storage, and other charges allowed by the government, before all other liabilities of the owner, even if he be bankrupt, can be recognized.

(12) Such railway companies as are authorized to make advances on grain are entitled: (a) To grant loans from their own means not being previously advanced by the Imperial Bank; (b) to build or hire warehouses for storing such grain for a period of six months, charging for storage a certain percentage, which is fixed for each depot by the Ministry of Ways and Communications, not exceeding one third of one copeck per pood per month, and to engage special agents for the purpose of selling grain on behalf of the owner, charging a commission therefor not exceeding 1 per cent. of the total amount received.

(13) The railway companies must bear the entire responsibility for the advances made on behalf of the Imperial Bank.

(14) If the amount due to the Imperial Bank is not paid in seven days after the sale of the goods, or within seven days after the loan expires, the railway company must pay, besides the interest to the day of settlement, a fine of one-half of 1 per cent. a month for the amount overdue.

(15) The reserve fund, mentioned above, may be used, by permission of the Ministries of Ways and Communications and of Finances, as a gratuity to railway officials, and to cover any loss sustained by the railway company in the operation of the loan.

(16) The railway company may make advances (a) on grain intended for transportation and on grain stored in warehouses at the starting point, charging for storage not more than one-third of one copeck per pood per month; (b) on grain received by the railway company for transport, whether stored or loaded upon the cars at once or not; (c) on grain arrived at the place of destination and stored there in warehouses until sold or consigned, the charges remaining in all cases the same.

(17) Advances cannot be made on grain which is already hypothecated, or upon which any unsettled charges whatever are resting.

(18) In fixing the highest percentage for advances on grain, the prices current at the place of destination are taken as the basis of such calculation, provided, however, that such place of destination is a market place. In making such calculation the usual expenses of transportation are reckoned as a portion of the sum loaned. The highest advances which may be made by any depot and for any kind of grain are fixed by the respective railway companies, they in turn being responsible to the Imperial Bank.

(19) The charges mentioned in paragraph 4, *viz.*, one-third of 1 per cent. of the sum advanced, are entirely put into the reserve fund of the respective railway companies and placed to the credit of the Imperial Bank. This one-third of 1 per cent. so advanced is thus divided: Two-thirds go to the railway company at the starting point, and one-third to the railway company at the place of destination for the management of the loan.

(20) When an advance is granted, an indorsement to that effect has to be made both on the railway note and its duplicate, mentioning the date on which the advance is made, the rate of interest, and other charges on the loan. Besides this, the receiver of the loan gives a special receipt for the money advanced either on grain which is intended for transport, or which has been received to be stored in warehouses. When the loan is repaid the receipt and other papers are returned to the borrower.

(21) In case of advances made at the place of destination, the railway companies are entitled to retain from the advance all their charges except those charged for the operation of the loan. An indorsement to this effect is made both on the railway note and on its duplicate.

(22) The officers of the different railway companies are compelled to inform the other companies, as well as the Imperial Bank, of the amount of grain received in warehouses at the different railway depots, as well as to advertise this fact in the local newspapers, that all may know when a given warehouse is full and unable to receive any more grain.

(23) The owner of grain which is intended for transport and is stored in warehouses may receive it back on demand on paying the usual fee for storage, *viz.*, one-

third of one copeck per pood per month, and on settlement of all legal claims relative thereto. [A copeck is equal to about .0058 cents in United States money. A pood is equal to 36.10 avoirdupois pounds.]

(24) If the owner of the grain wishes it warehoused at the place of its destination, he must declare such intention in advance, and an indorsement to that effect must be made on the railway note and its duplicate; provided, however, if the warehouses at the place of destination are full, such a request can not be granted.

(25) Cleaning, reshoveling, and screening of grain stored in warehouses must only be done under the supervision of the railway company. Before taking measures to prevent the warehoused grain from being damaged, the railway company must inform the owner or his representative of the necessity of such action.

(26) Should the railway company be compelled to sell the hypothecated grain for reasons mentioned in paragraph 10, the order for the sale may be revoked if the advance, or a reasonable part of it, be repaid seven days after the receipt of the notice of the intended sale.

In addition to the general rules governing this question, as enumerated above, I have learned that no distinction is made between farmers and so-called middlemen. The loans are made only on the grain, and it is of no consequence who delivers it and negotiates the loan.

All such loans are made in paper rubles, the regular and only real currency of this empire, and these paper rubles are taken from the regular governmental issues.

This scheme went into effect on June 14-26, 1888, and at the present day it is generally adopted throughout the country, and business is carried on under it on a very large scale. I should also add that the scheme gives great satisfaction to the farmers, many of whom declare that it has been an essential feature of successful farming in Russia.

GRAIN STEALING, AND THE REASON WHY.

BY OBSERVER.

I think I may truly say that my experience in elevator weighing, and my opportunities for investigating this problem, have been entirely on the ground floor. Throughout my career as elevator accountant, the slack methods, the absolute looseness of permitting weighmen to enter such important figures as the weight of grain, carload after carload, without any check on their work, has always been to me a perfectly reasonable explanation of the big differences between our weights and those of shippers.

I must admit that no importance was attached to these views by the manager of our elevators. The men were regularly cautioned to be careful, and the manager thought that as our men were experienced and were in constant practice, their figures were certainly more trustworthy than those of shippers. Now and then a car number would be transposed or distorted. Such instances I made use of to prove to our easy minded officials that our men were not infallible; that if they transposed car numbers they could reasonably be suspected of transposing weights. But this was met by the excuse that they were, perhaps, not as careful with car numbers as they were with weights, because the car numbers could be easily corrected. When I claimed that the reverse was the case, that they were, in fact, more careful in handling car numbers because their errors could be easily detected, they "rather thought not." We kept on explaining to shippers about the experience of our weighmen, and how we tested all of our scales daily with a full carload of grain. Sometimes copies of our foreman's report to the superintendent of such tests were sent to the shipper or furnished the consignee. But somehow the trifling difference of ten pounds or such a matter between the weight of the carload on five or six different scales failed to soothe the shipper. It seemed to have a sort of reverse action. Our manager seemed to be the one soothed instead of the soother. And so the matter dragged along.

Finally an improved scale was invented which seemed to us to be a stroke in the right direction. The inventor was anxious to have us give it a trial, but our manager was imperturbable. And why should he not be so? Was it not a matter of record that the yearly surplus ran about the same, year in and year out! If this check on the entry of weights was of so much importance, why did not the surplus of one year compared with another make it manifest that errors were made in this way? I do not pretend to say that this was exactly the managerial train of logic,

but subsequent developments seemed to point that way. However, by dint of "personal solicitation" on the part of our superintendent, the improved scale beams were attached to our scales. For two or three years thereafter our manager enjoyed peace. Then a storm broke, and elevator stealing was a daily newspaper theme for weeks. In justice to our heretofore indifferent manager, it must be said that he had repeatedly tackled the surplus problem, and seemed to be earnestly desirous of reducing it. Our orders to the weighman were of the cast iron sort, and were to the effect that they must weigh close. When the patent beams were put in the orders on this subject were made of steel. And the result?

When the storm above referred to broke over the land our new system had been in use something over two years, but our manager, consistent to the last, sturdily withheld his admission that the improved beams were getting at the root of the evil. Now, however, he came down and acknowledged handsomely that they had made it possible for him to face the storm with a clean conscience. Why? Our elevators, which among others had been charged with stealing grain from shippers, had had in the preceding two years practically no surplus whatever.

What does this prove but the fact that with close weighing and no mistakes, an elevator may, without loss, handle millions of bushels of grain a year, giving every shipper just and correct weights. It proves also that the element of uncertainty in handling grain without an absolute check on the figures entered by the weighman, is responsible, in a great measure, for the too large surpluses often found in grain elevators at the end of the year, because the weighmen are really responsible for a shortage if one should occur. They have weighed the grain in, and they have weighed it out, and if a shortage occurs at the end of the year they realize as clearly as any one that they are objects of suspicion of either dishonesty or incompetency. Naturally enough, then, the tendency is to weigh in favor of the elevator, and as mistakes are sure to occur, there is always this element of uncertainty which acts as a still greater incentive with the weighman to be on the safe side. The result, an unreasonably large surplus.

This state of affairs has become a fixed fact. The experienced elevator employe does not have to figure hard to satisfy himself that he can dispose of enough wheat to help himself out nicely without his little appropriations being missed. That this is true is clearly proven by the late discoveries of systematic grain stealing. These discoveries are in most cases the result of complaints and pressing claims of short shippers and receivers. I have not noticed a single instance, I think, where dishonesty or theft was suspected or detected by reason of a shortage in the elevator stock.

But how about grain stolen from the cars outside of the elevators? Surely the elevators are not to blame for this. Not entirely, but partly, and here is the proof. If this looseness and unfixable responsibility for difference between elevator weights and shippers' weights had not come to be a notorious and almost universal fact, these thefts would never have become common, because suspicion would have been aroused at once. The fact that these differences seemed to indicate that no one knew or could find out where to lay the blame, was an invitation to every evil disposed person connected with the business to help himself. Hence the hue and cry of robbery. I once showed our improved system to a dissatisfied shipper. He had come down, and had brought his temper with him, to see about a difference of 3,000 pounds. After a very short and, apparently, disinterested investigation, he broke out impatiently, and with the air of a discoverer—"That's no good; w'y see heyr! Sposen I weigh a car of grain and then set the poise back heyr and take off yer reckerd. How you goin' to get around that? That thing (very contemptuously) aint a goin' to ketch no thief." "Don't be too sure about that, Mr. Blank," I answered. "I explained to you that the object of this device is to detect errors; I never claimed it would catch a thief. But now you speak of it, I believe it will. A man who attempts to take advantage of an elevator by representing that his car is two or three thousand pounds short when that is not the case at all, and he knows it, is no less a thief than the kind of thief this device fails to catch." "You don't mean to say I'm a thief, do ye?" "No, sir! Mr. Blank (he was a big, heavy man, and might have been scolded, too, for all I knew); far from it, Mr. Blank, but you see it's just like this: We have often had good evidence that this has been done. It has happened that an elevator has been obliged now and then to pay for a shortage, but of

course in such cases the shippers' evidence has been first-class. But since we've got this thing no amount of shippers' claims could make us pay a shortage, because you see we can't make a mistake but what we can detect. Nowadays when a shipper claims a shortage we just quietly conclude that either he has made a bona fide error or else he is—er—misrepresenting, don't you see?" At this safe distance of time and space I may say that Mr. Blank had been a chronic kicker, and that we had been laying for him. This very car on which he claimed a shortage of nearly 3,000 pounds, I had weighed myself, after which the weighman weighed it regularly. I had in addition taken the precaution to weigh the car preceding his, which weighed out within twenty pounds of shipper's weight. We never had but one claim from Mr. Blank after this, and we all thought that was made to "keep up appearances."

There is no doubt in my mind, therefore, that the true reason why grain stealing has become so common is because of this ever present and undeterminable question of errors. It makes no difference how accurate your scales are, the work of the scales is done when the beams balance with the load. Then comes the adding together and entering of figures, which the weighman must do, and unless this work can be proved, the field for dishonesty becomes simply a big common. Isn't this true? How would it be in the banking business, in our county treasurer's office, in our customs offices, if everybody concerned could charge every other body of having made a mistake, and nobody concerned could fix the mistake on anybody else. Would the business be carried on honestly? Well, is not this exactly the state of affairs where in case of a difference the elevator officers and the shipper affirm, and no one has reasonable proof to show that this matter of recording weights has been correctly done.

What is reasonable proof? Nothing short of a balance of entries. Called and checked proof is not to be relied on. Every clerk will tell you that. One man going over another's work is not reliable. Not long ago we read in the columns of this excellent journal an elaborate explanation of how the weighing is done at Duluth, from which we are led to believe that every draft delivered to a vessel by the elevator weighman is checked and duplicated by the state weighman or inspector. How can a mistake happen with such a system of checks? Let us be duly impressed. The man who does the checking is not an ordinary person, a common tallyman, but a high official—a state inspector. Are we all duly impressed? Then let us read the following from the January number of this same journal: "Duluth wheat cargoes are, on the whole, holding out much better than any previous fall on record," writes the Buffalo correspondent of the *Marine Record*. * * * "The America's shortage of a little over 500 bushels was no doubt a mistake of a draft. She had a similar one last fall, but got no redress." Now let us observe how our esteemed Buffalo correspondent of the *Marine Record* proposes to fix this matter. He says further: "This feature of making the vessel responsible for weighmaster's errors (which weighmaster?) is all wrong, and calls for a change in the wording of the bills of lading." It is evident this Buffalo correspondent of the *Marine Record* is a vessel owner. But of this at some other time. The question which arises here is: "Where was the state inspector?" The errors above referred to, if they were made at Duluth, signify that the figures representing 500 bushels of wheat, were charged to the vessel while the wheat was not delivered. This instance only goes to show that nothing in the way of checks short of a perfect system of balances will give us a perfect system of weighing. The sooner this theory is acted upon the sooner this notorious evil will be done away with.

Exports of barley from Toronto, Canada, by boat during the season aggregate 297,162 bushels, a material decrease.

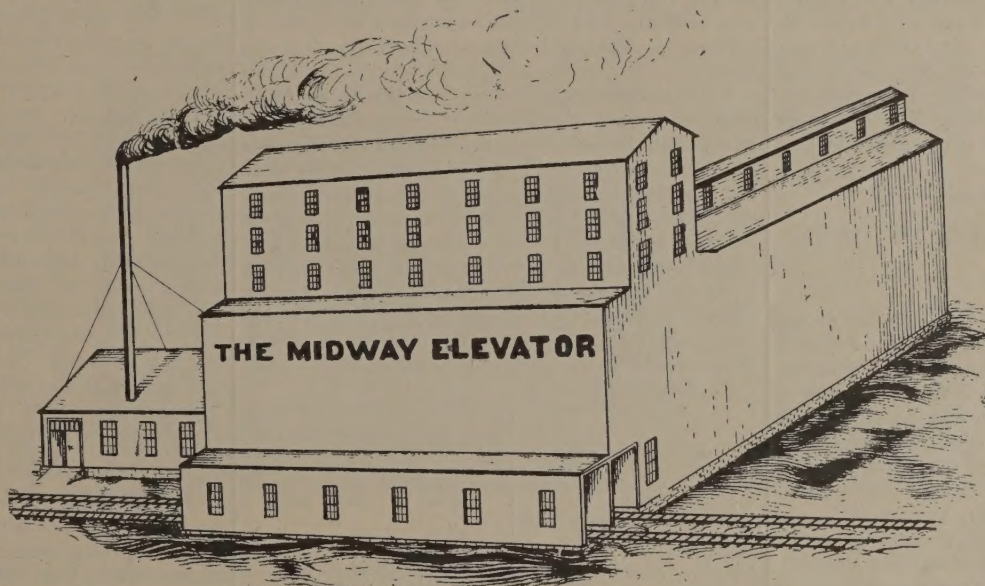
THE MIDWAY ELEVATOR AT MINNEAPOLIS.

The work of enlarging and remodeling the Midway Elevator, illustrated herewith, at Minneapolis, has been completed, and the Midway Elevator Company now has one of the best cleaning and storage houses at that point. The storage capacity is 500,000 bushels, and forty cars can be received, cleaned and shipped each day.

The elevator is 84x112 and 95 feet high. The cribbing extends up to a height of 67 feet. In an adjoining house, through which the shipping track runs, are two sixty-ton Fairbanks track scales. The receiving track runs through main building and is also provided with two sixty-ton Fairbanks scales, provided with the patent Fisher beam. No hopper scales are used in the house.

Four Peerless Power Grain Shovels, supplied by the Great Western Manufacturing Company of Leavenworth, Kan., are used in unloading the cars. In side of house next to shipping track are six hanging shipping bins. Two 24-inch belt conveyors provided with Webster's Automatic Trips convey the grain to the different bins.

The house is provided with power car pullers, and each of the receiving legs is provided with double steam shovels. The house is provided with two large size Eureka Grain Cleaners. The storage part of the elevator, which is lower than the part used for clean-



THE MIDWAY ELEVATOR AT MINNEAPOLIS.

ing, adjoins it on the side as is shown in cut given.

Power is furnished by 175 horse power engine. The engine and boiler room is 24x30 feet and one story.

In the spring the handling capacity of the house will probably be increased to seventy-five cars per day.

The officers of the Midway Elevator Company are: President, S. S. Linton; vice-president, W. G. Crocker; treasurer, W. D. Gregory, and secretary, E. H. Gregory. The elevator is along the tracks of the Great Northern at Thirteenth avenue S. E.

The work was planned and completed by Honstain Bros., architects and builders of grain elevators, Room 424 Beery Block, Minneapolis.

More steers are being fed in this part of the country than ever before. It is estimated that in Wayne county most of the home grown corn will be fed on the ground where it was raised.—*Wakefield, Neb. Republican*.

The work of Mr. Murphy, the American representative of the Agricultural Department, who has been traveling all over Europe demonstrating the value of Indian corn for food purposes, is beginning to bear fruit. Much of the recent activity in corn on export account is attributed to the fact that they are taking our corn as a substitute for wheat and rye.—*Toledo Market Report*.

There will be a rain convention held at Miller, S. D., January 20 and 21. Delegates will be present from half a dozen adjoining counties, also a representative of the Melbourne Rainmaking Company of Kansas, at which time the merits of the new rain-producing process will be fully investigated and a contract entered into to moisten these several counties by ready-made showers during this year's crop, if found necessary.

BANGOR'S NEW GRAIN ELEVATOR.

J. C. Towle & Co., grain merchants, have recently completed extensive improvements which give them facilities for handling grain and conducting their business that are unequaled in Eastern Maine, says the *Industrial Journal* of Bangor, Me. They have replaced the three story storage sheds by a five-story extension surmounted by an elevator tower, the new part being 30 feet wide by 50 feet long, substantially constructed of heavy timbers braced by ship knees, and extending to the water's edge on their wharf facing the Kenduskeag stream. This addition they have fitted with a complete outfit of elevator machinery from the John T. Noye Manufacturing Company of Buffalo, N. Y., consisting of an improved ship elevator, hopper scales, two grinding mills and a bolting mill for corn, engine, boiler, and all the necessary conveyors to conduct the grain to the storage bins, or handle it for shipment.

Messrs. Towle & Co. are very large dealers in corn, a hundred vessels or thereabouts discharging this commodity at their storehouses in the course of a season, besides the large amounts that come by rail during the winter months. With their improved facilities the corn is handled automatically with great dispatch, while the mills have a capacity for grinding 1,200 bushels of meal and cracked corn daily. As the loaded vessel lies at the wharf in front of the storehouses, the elevator spout is lowered into the hold. The elevator discharges the grain into the loft above, whence it falls through a spout to the ground floor, into a large hopper scale, where it is weighed. Thence it is again elevated to the loft, and conducted through spouts to the storage bins on the several upper floors of the building. From these bins spouts lead down to the grinding mills on the first floor, and to various parts of the store, where the corn, whole or cracked, or in coarse meal or fine, is bagged and shipped as needed. A driveway extends around the outside of the building and through the basement story, so that by means of openings in the floor teams may discharge or load precisely as do the vessels in the stream.

The grinding mills consist of a six-roll mill and a two-roll mill located on the first floor, and a reel-mill for making bolted meal on the fifth floor. The whole is run by a 50-horse power automatic engine, supplied with steam by a boiler of 65-horse power capacity. All the machinery, as above stated, is of Buffalo manufacture, where the art of handling grain in large quantities with cheapness and dispatch seems to have reached its highest limit. The construction is thorough, substantial and first-class in every respect.

The firm of J. C. Towle & Co., which is one of the most substantial and enterprising in Bangor, consists of Mr. Josiah C. Towle, who has been in the business for many years, and his son, Mr. J. Norman Towle, who became a partner about two years and a half ago. They have built up a large and steadily increasing wholesale trade, covering the whole of Eastern and Northern Maine. They buy direct from Chicago, St. Louis, Minneapolis, and other Western centers of the grain trade.

Major G. A. Camp has been experimenting with alfalfa on his farm at Lake Minnetonka, Minn., for two years with good success. He intends to put in a large crop next season.

Another case of inspecting grain out of store for export on a lower standard than when it is inspected into store came up late Thursday last, when a sample of a boatload of No. 2 corn delivered to an exporter's steamer was rejected on the ground that it was poor steamer instead, and the seller refused to make it good not only, but notified the exporter to show the sample, on the ground that he is compelled to accept the inspector's certificate, no matter what the corn may be.—*Commercial Bulletin, New York*.

FACILITIES FOR HANDLING GRAIN AT NEW ORLEANS.

The British steamer Chancellor, and others equally large, have been loaded promptly at New Orleans wharves, and go to sea without delay or detention, which facts should be sufficient to convince the people of the West who are so diligently searching for a deep water harbor on the Gulf of Mexico, that they have one here at New Orleans second to none in the world; hence, instead of wasting their time advocating the location of a harbor on the Texas coast, or dredging impossible channels, they should unite in making this point the tide-water port for their entire region. Now that water communication with the West is fully open again, we may expect to see the grain exporting movement resumed with vigor. Yesterday a single tow of barges from St. Louis brought 272,545 bushels of grain, all of which is for export.

Illinois Central Railroad officials have been studying the elevator question seriously for four or five months, and the assistance of the people will have much to do in facilitating a conclusion. The Illinois Central has a comprehensive plan, including an elevator with a large independent storage capacity for the purpose of local trade and plantation supplies. The Texas & Pacific also propose an elevator at Westwego, which is to handle the increased volume of grain which will come over the Missouri Pacific and the branch to Alexandria, which is rapidly approaching completion. This matter is interesting as showing the general tendency at New Orleans to prepare for a bigger export trade by that port, and also as connected with the plans of flour millers of certain sections of the country to ship flour by New Orleans for export, either to Cuba or the West Indies destinations, or to Europe.—*New Orleans Picayune*.

DELAY OF LAKE GRAIN CARRIERS.

The detention of valuable property at Buffalo during the closing weeks of navigation has been the means of calling the attention of vesselmen to the demurrage clause, or rather the absence of it from their bills of lading; these have been arranged to suit the convenience and pleasure of the shipper and consignee without any attention being paid to the claims of the common carrier.

It is always best in the end, for forms of charter party, bills of lading, shipping notes, etc., to be made out in the most inclusive terms and all clauses applying to the ordinary mode of transportation by water duly observed. "The custom of the port" is after all a very loose way of defining time in connection with the discharging or loading of cargo, so that no bill of lading is in complete form unless the lay days, or hours, as more suitable for lake trade are stipulated, also the number of days or hours over which the demurrage shall extend after the lay days have expired. It is somewhat difficult to determine at what time demurrage should commence in the absence of any stipulation regarding time, and shippers recognizing this feature were more than inconsiderate by consigning vessels to an elevator at Buffalo which they must have known would cause an alarming delay and a consequent financial loss to the steamers accepting their business.

Vessel owners are not litigiously inclined, or their vessels after waiting a liberal time for discharge would have been ordered to another port to unload, and their cargo held until all charges had been liquidated. The one great and essential point invariably required by the courts is to show proof of loss, and this feature has been most prominent in the recent delays; the only question remaining is as to the limit or amount of time lost, the custom of the port should rule, not from the longest time ever consumed in elevating a cargo, nor yet from the speediest, but from a fair average mean of working hours. This having been satisfactorily determined, the vessel is certainly entitled to recompense for every hour detained over and above the time in which the cargo would have been discharged according to the usual "custom of the port." The questions to be determined are, how long was the steamer detained, at what time did demurrage begin and end, and what amount per hour is the vessel entitled to during that time, also what amount the steamer would have earned under a new and succeeding charter entered into at the expiration of her demurrage time and what further expenses were incurred through the detention. In the usual contracts of affreightment

the binding and saving clauses, lay days, and demurrage are clearly defined, so that at their expiration other means are at hand for the vessel owner to obtain justice, yet it would appear, that where these features are entirely absent, the hackneyed "custom of the port" is the only equitable basis on which to move.

The liability for demurrage where the bill of lading contains no such clause or stipulation, has been ruled upon by the admiralty courts as a proper claim, and it has been held that the master had a lien upon the cargo for demurrage, although demurrage was not expressly stipulated for in the bill of lading, so that there is good cause and grounds for action by the owners of vessel property whose boats have been delayed through the blockade at Buffalo.—*Marine Record*.

YIELD OF WHEAT VARIETIES UNDER THE SAME AND DIFFERENT CONDITIONS.

The following table gives the principal results of a comparative test of fifty-one differently named sorts of wheat at the Ohio Experiment Station.

The wheat was grown on bottom land, a part of which had been in wheat in 1890, and a part in clover that year. The wheat on the clover sod lodged about a month before harvest, while that on wheat stubble lodged but little and gave as large a yield of grain, averaging a better weight per bushel. The nine lots last named grew on the stubble.

Not all the differently named sorts on this list are really distinct. We find no difference as yet between Sibley's New Golden, Tasmanian Red and Mediterranean; between Reliable and Valley, and but little, if any, between these and Egyptian; between Red Fultz, German Emperor and "Michigan Amber," but the latter may be wrongly named; between Silver Chaff, Martin's Amber and Landreth; between Royal Australian and Clawson; between Diehl-Mediterranean and Missouri Blue Stem.

It will be noticed that the largest yield this year has come from Rudy, Surprise, Valley and its synonyms, Democrat and Russian Red, while several other sorts follow closely behind.

Name of Variety.	Yield per Acre.	Weight of Measured Bushel.	Date of Ripening.
Wyandotte Red.....	32.00	58.5	July 1
Velvet Chaff (Penquite's Velvet).....	27.00	60.0	June 30
Mediterranean.....	34.50	57.5	July 1
Lehigh.....	31.16	58.0	July 1
Hindustan.....	30.16	59.5	July 1
Sibley's New Golden.....	33.00	58.0	July 1
Tasmanian Red.....	33.16	52.0	July 1
Democrat.....	38.16	60.5	July 2
Deitz.....	30.66	60.0	July 2
Lebanon.....	31.00	60.0	July 1
Reliable.....	39.14	60.0	July 1
Valley.....	39.58	59.0	July 1
Egyptian.....	37.25	60.0	July 2
Red Fultz.....	32.41	58.0	July 1
Michigan Amber.....	32.66	58.5	July 1
German Emperor.....	32.33	51.5	July 1
Poole.....	35.91	58.5	July 1
Witter.....	35.66	57.0	June 30
Nigger.....	31.66	59.0	June 28
Diehl-Mediterranean.....	37.66	60.0	July 1
Miller's Prolific.....	33.00	59.0	June 30
Sheriff.....	33.83	54.5	June 29
Big English.....	31.66	61.0	July 1
Tuscan Islands.....	33.58	55.0	July 1
Surprise.....	40.91	56.0	July 3
Mealy.....	36.08	50.5	July 2
Golden Prolific.....	35.58	55.0	July 1
Russian Red.....	37.33	57.0	July 3
Hicks.....	33.66	56.0	June 29
Fultz.....	35.66	53.0	June 29
Ontario Wonder.....	29.00	60.0	July 2
Currell's Prolific.....	27.75	58.0	June 28
Improved Rice.....	30.00	57.0	July 2
Extra Early Oakley.....	29.83	59.0	July 2
Silver Chaff.....	30.16	57.0	July 3
Martin's Amber.....	28.83	60.0	July 1
Landreth.....	25.33	52.0	July 3
Royal Australian.....	24.50	57.5	July 4
Theiss.....	30.50	54.5	July 2
Oregon.....	32.00	58.5	July 1
Longberry.....	27.50	55.5	July 1
Crane.....	27.50	57.0	July 2
Miami Valley.....	35.33	60.5	July 1
Rudy.....	40.50	61.0	July 3
Wisconsin Triumph.....	33.41	62.0	June 30
Rock Velvet.....	33.00	61.5	June 30
Early Ripe.....	34.83	60.0	June 30
New Longberry Red Wabash.....	32.08	60.0	July 1
Missouri Blue Stem.....	34.83	61.0	July 1
Bearded Monarch.....	31.08	70.0	July 1
Fairfield.....	26.66	59.0	July 1

An anti-option bill has been introduced into the House of Representatives by Mr. Brosius of Pennsylvania.

IMPROVED GRAIN SAMPLER.

The improved grain sampler is now manufactured by the original inventor of the Tube Grain Sampler heretofore in use. The improvements consist of a shear cut off added to the holes of the inner tube, so that in closing the sampler when filled with grain, it moves easily through the grain, closing the holes without friction or catching and cutting kernels of wheat or other grain. Also another valuable improvement added is discharging the grain from sampler. Instead of pouring it out at the lower holes of sampler as heretofore, scattering the grain, the discharge port is at the end of the handle, through the inner tube, which allows the grain to run into the sample sack quickly without scattering the sample drawn, and is easily and quickly operated. Its use is simple. Insert the sampler into the grain closed. Turn to the right and it is filled. Turn again to the right and it is closed. Draw your sampler, examine your grain, and by lowering your right hand the grain is discharged through the handle into the sample sack. It is operated easily and rapidly, and pronounced the best grain sampler ever offered to the trade.

The manufacturers, Stacy & Douglas, Minneapolis, make for department inspectors the 52 inch brass tube sampler, with steel points $1\frac{1}{2}$ inches in diameter, with a shear cut-off on the inner tube, which allows the sampler to be closed easily without cutting kernels of grain. There is a partition to the lower part of the inner tube to keep the grain separate from the upper part, and an extra valve at the lower part of the inner tube so that this portion of the sample of grain is discharged by itself and kept separate. Also, when desired, a single sample can be drawn from any part of the car or bin through this extra valve and discharged by itself. The grain in upper part of sampler is discharged through end of the handle from the inner tube, and is operated easily and quickly. The 44 inch sampler has the shear cut offs and discharges the sample drawn through the handle of the inner tube into the sample sack, and is pronounced the most complete sampler ever made for sampling grain.

The 36-inch wagon size is made same as the 44-inch except as to length. The flaxseed samplers are made to operate on same plan and are made in any length to suit, from three to ten feet. Any further information will be gladly furnished by the makers.

MUZZLED GRAIN SHOVELERS.

Some men who wear muzzles when they work were discovered by a New York *Press* reporter at the West Fifty ninth street grain elevator in that city the other day.



These men stand in the holds of vessels and shovel the grain as it comes down the "legs" that run from the elevator to the boats. Of course they become gray with dust after working a few minutes, and unless they wear the masks the nostrils become filled with the cortications.

There are two very distinct kinds of insects that infest stored grains. One is a weevil and the other a small moth. Kiln drying the grain will destroy both kinds, but as this is a very expensive operation, it is seldom practiced. If you store your grain in bins try lining the bins with tar paper and throw in a few sheets of the same as the grain is put in the bins. The fumes of the tar will usually repel such insects, although they do not kill them.—*New York Sun*.

INDEPENDENT OWNERSHIP OF FREIGHT CARS.

Certain benefits might accrue in the transportation business if the freight cars were more generally owned by companies other than those which own the roadbeds over which the cars are operated. There is a tendency to increase this division of ownership. I think that there can be no doubt that in the last five years the number of cars which have been built for special use by mercantile and manufacturing concerns has been large. I have no means of estimating how great this addition to the freight equipment of the country has been. But any one at all familiar with the transportation business will have no difficulty in calling to mind many instances in which the managers of prosperous enterprises have found it judicious to purchase cars specially adapted to their uses.

To those who have not given heed to the subject it may seem like the gratification of a whim, or a luxury, or desire for an advertisement, that leads Armour or Swift, or a furniture factory in Grand Rapids, or a manufacturer of wooden ware in Sheboygan, or any one of a thousand concerns whose names one sees in fancy letters on freight cars throughout the country to possess their private vehicles for carrying their wares to market. Very likely this may seem to the public a rich man's extravagance, like owning a yacht or a fast trotter, but a little attention to the business question involved shows that, apart from the convenience and gratification of personal pride and the advertisement, there is really a very satisfactory return on capital invested in this way.

The ownership of cars by the shippers themselves is not encouraged by the railroads. At first it was strongly opposed. It was only after persistence on the part of the shippers in the use of their own cars that the railroad companies came to regard it with tolerance. Railroad men at first held that the independent ownership of freight cars must cause inextricable confusion. It has worked out in practice, however, that the concerns which have their own cars get the best service and have their goods most satisfactorily handled.

The method of charging for the transportation of goods in cars owned independently of the railroads, is, I think, not generally understood. The system was dictated by the railroad companies, and possibly was intended to discourage the shippers from investing in that kind of property. Full tariff rates on the goods shipped in these special cars are charged. No rebate is asked or granted. The goods are subject to all the conditions attaching to goods shipped in the cars which belong to the railroad companies. A mileage payment, however, the same as is paid by one railroad to another for the use of cars, is allowed to the owner of the cars. This is reckoned independently of the freight bills, goes through a separate channel and is settled without regard to the charges for the transportation of the goods, the same as if the owner of the cars were another railroad company. The usual mileage allowance is three-fourths of a cent per mile.

It is not difficult to figure what the return may be on capital invested in independent ownership of freight cars. Say that a company engaged in any form of production, or manufacturing, has a certain number of tons monthly to send to market. If the product is capable of regular shipment, it can be readily calculated how many cars may be constantly employed in moving it. A car in constant employment will, in the ordinary course, make several thousand miles per month. Say that it has a mileage of two thousand miles per month, which is a low estimate, I believe, for a car in constant use, its mileage payment will be \$15 per month, or \$180 per year. The cost of a box freight car with the usual appliances, air brakes, etc., is about \$500. Say that some special fittings are added to make the car adapted to the transportation of the special products for which it is designed, which in itself is a distinct gain; the total cost of the car may be \$700. It can be readily seen that the return on a capital thus invested would be satisfactory. The life of a freight car is supposed to be about ten years. The railroad com-

panies, according to the rules of the road, pay for all extraordinary damages. If a car is burned or smashed the owner is reimbursed therefor. A freight car may reasonably be expected therefore to pay for itself twice over during its life.

It is obvious that a strong concern can very profitably therefore, if its product is continuous, own the cars in which its goods are sent to market. There are some lines of production in which these conditions do not prevail; for example, the raising of agricultural products. Cereals and cattle must be sent to market only in the appropriate season. If a cattle company or large farmer should invest in equipment, they would have use of it but for a very limited time for the transportation of their own products. Consequently independent ownership of freight cars would not be profitable to them, unless they could arrange for their use for other purposes during those times of the year when they had nothing to ship. For the uses of shippers of such commodities as seek a market only at special seasons it is possible that cars may be furnished by independent ownership. Any large shipper of agricultural products may lease cars when he needs them for his own use exclusively. This is done now frequently by those who send cattle to market. I have learned recently of a very successful use of independently owned cars in carrying poultry from the far West to the seaboard. It may be imagined that sometimes it will be advantageous to secure cars in this way for the transportation of wheat and corn and other com-

PACIFIC COAST ELEVATOR AT PORTLAND.

The grain handlers of the Pacific coast have been very slow in adopting Eastern methods of handling grain, in fact they have opposed the innovation and discouragingly predicted its certain failure. Most of the grain exported from the Pacific coast states is shipped to Europe by way of Cape Horn. To prevent the grain shifting about in the vessel on this long journey, it has been the custom to ship it in jute bags. In California the grain is transported from field to port in bags, but in Washington and Oregon much of the grain is taken to the seaboard in bulk. This system, which was introduced on the coast by an Eastern grain firm, is gaining favor, and even well established, conservative firms of San Francisco are considering the advisability of providing facilities for handling grain in bulk.

The Pacific Coast Elevator Company, which owns the Pacific Coast Elevator illustrated herewith, has forty-five country houses for handling bulk grain in Oregon, Washington, Idaho. Ten of these houses are warehouses and thirty-five are elevators. Every one was built by Simpson & Robinson, elevator architects and builders of Minneapolis.

The Pacific Coast Elevator at Portland, which has a capacity for 1,000,000 bushels of grain, serves as a terminal elevator for the company's system of country houses. It has facilities for sacking and loading 5,000 sacks per hour, and contains Barnard & Leas Cleaning Machines. As shippers can hold vessels for thirty days, called lay days, there is little demand for rapid loading. When the Nicaragua canal is completed, grain will be transported to Europe by water much more quickly, and in bulk. Then the modern grain elevators of the states east of the Rockies will be in demand everywhere on the Pacific coast.

The builders of the Pacific Coast Elevator knew that the house would be subject to severe criticism, so made every effort to secure a first-class house. The president of the company, Frank H. Peavey, who is also interested in a number of large houses throughout the country, says he considers the Pacific Coast Elevator by far the best equipped

house in the country. Last year 3,500,000 bushels of grain were shipped to Europe from this house. The receipts of grain at Portland during the crop year ending July 31, 1891, included 4,506,448 centals of wheat, 401,378 of oats, 279,285 of barley, and 10,253,029 pounds of flaxseed; against 3,019,181 centals of wheat, 479,654 of oats, 11,007 of barley, and 6,670,551 pounds of flaxseed during the preceding crop year.

The Pacific Coast Elevator Company will build new houses as fast as good openings are found for them. It is on the coast to stay and to handle grain in its way. The company has a paid-up capital stock of \$750,000. The officers are president F. H. Peavey, vice-president, general manager and treasurer, E. C. Michener; secretary, C. W. Tracy, and W. D. Deaver, assistant secretary and treasurer.

New Orleans in December exported 237,053 bushels of corn, distributed among sixteen vessels, and none in December, 1890. Twenty-five ships carried 1,037,703 bushels of wheat in December, against 202,377 bushels exported the preceding December. Of rye the exports were 57,719 bushels, in three vessels, and none in December, 1890.

"This country is able to find a foreign market for hardly four per cent. of our own corn product." We think this is incorrect. On our last large crop, from the beginning of the crop year in November we exported more than one hundred millions of bushels. In the same year we exported more than one and one-half millions bushels in corn meal. Besides the above we exported some hundreds of millions in pork alive, and its dead product, and beef, ditto. To export an additional hundred million bushels in the grain is desirable, and it would have quite an appreciable influence on the price, and place the cereal nearer its proper relative price position with wheat.—*Toledo Market Report.*



Erected in 1889.

PACIFIC COAST ELEVATOR AT PORTLAND, OREGON.

modities which require least care and are carried at lowest rate.—*The Economist.*

In connection herewith it will be interesting to our readers to know that one large grain firm of the country has considered it of sufficient advantage to buy cars for transporting its grain to the seaboard. We believe Peavey & Co. is the first grain handling firm to take this move. A company has been organized, which will be known as the Peavey Grain Line Company. Five hundred grain cars have been purchased, and will be run from Kansas City to the Atlantic seaboard via the Atchison, Topeka & Santa Fe Railway. To other grain dealers shipping from the same territory this is exceedingly good news, as it will reduce the demand upon the carriers for cars and enable the railroad companies of the Southwest to supply grain shippers' demands for cars more promptly.

Reports received by houses controlling a large number of elevators in Illinois are that the farmers are not selling their oats with any degree of freedom. They say that consumption of oats has been greatly increased ever since the new crop commenced to move by the high price for corn, and they do not look for very low prices, and believe that oats are a purchase on any further break.

In many parts of the country the marketing of grain has been greatly interfered with by impassable roads. In New Jersey the road improvement movement has become so strong that it is proposed to take \$100,000 annually from the revenues of the state and devote it to a road fund. The farmers of the state will meet on January 21 in convention to promote such appropriation. A big road improvement convention would help the farmers more than a hundred Alliance conventions can. General road improvement would be the most economical process the farmers can promote.



[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

CANNOT AFFORD TO BE WITHOUT IT.

Editor American Elevator and Grain Trade:—I cannot afford to be without your journal so I inclose \$1 for another year's subscription to the AMERICAN ELEVATOR AND GRAIN TRADE.

V. E. CHAMBERLIN.

Powell, Neb.

COULD NOT DO WITHOUT.

Editor American Elevator and Grain Trade:—Inclosed please find \$1 for which send us the AMERICAN ELEVATOR AND GRAIN TRADE for one year. We cannot do without it now.

STUDABAKER, SALE & Co.

Bluffton, Ind.

WANTS IT THE REST OF HIS LIFE.

Editor American Elevator and Grain Trade:—Inclosed please find \$1 for which send me the AMERICAN ELEVATOR AND GRAIN TRADE. I have read several copies and I want it the rest of my life.

Yours,

J. AURACHER.

Ravenna, Neb.

WILL BUILD.

Editor American Elevator and Grain Trade:—I expect to erect an elevator here next summer with a capacity of about 10,000 bushels. Inclosed please find \$1 for which send me the AMERICAN ELEVATOR AND GRAIN TRADE for one year commencing with the January number.

Yours,

WALTER PARKS.

Airlie, Minn.

BETTER EACH YEAR.

Editor American Elevator and Grain Trade:—I have been a subscriber to the AMERICAN ELEVATOR AND GRAIN TRADE since its first year, and each year find it better than the year before, and so inclose subscription price for the coming year and two new subscribers to be added to your list, I. H. Nelson, agent N. W. E. Co., and Geo. Cudhie, agent G. N. Co., both of this place.

Yours truly,

W. H. COMRIE,

Arthur, N. D.

Agt. N. P. E. Co.

AN ELEVATOR WANTED AT MOBILE.

Editor American Elevator and Grain Trade:—We are looking into the matter of getting some one to build a grain elevator at this place, and from all the information at hand we think there is a fine opening here for a one-half-million-bushel elevator. Ships drawing eighteen feet of water can come up to our wharves and load.

Transportation rates from the grain regions into Mobile are the same as to New Orleans. We have a local grain trade of about 2,000,000 bushels. We will be glad to correspond with parties with a view to building an elevator. Inclosed please find \$1 for which send us the AMERICAN ELEVATOR AND GRAIN TRADE for one year. We have received a sample copy of the December number and got some valuable information from it.

W. F. WEST,

Secretary Commercial Club.

72 St. Michael street, Mobile, Ala.

LOST HIS ELEVATOR.

Editor American Elevator and Grain Trade:—On December 9 my elevator was burned. The fire started at about 4 o'clock in the morning and is supposed to have originated in the engine room, although very little fire was left in the furnace at night. The building, valued at \$3,500, was insured for \$2,200. About \$400 worth of corn was also burned, but this loss was fully covered by insurance.

I am rebuilding and expect to put in a Lewis Gas Engine, made by the Webster Manufacturing Company of Chicago, and the Barnard & Leas Manufacturing Company's Sheller and Cleaner. The remainder of the machinery will be of the best and latest make. I intend to put up a \$4,000 house and have it thoroughly first-class. I will put my engine fifty feet from the elevator building

in a brick engine room. Since July 8 I have handled 225 cars here.

Respectfully,
Natrona, Ill.

M. R. ARMINGTON.

CORN GRADING AT TWO MARKETS.

Editor American Elevator and Grain Trade:—I wish to call attention to the following from the Philadelphia Record of January 6: "Corn.—Receipts [at Philadelphia] 247,411 bushels; shipments, 30,648 bushels; stock, 1,091,755 bushels. The receipts were larger than the arrivals in any other city in the country and out of a total of 413 cars only 62 cars graded below No. 2 * * * The receipts [at Chicago] were liberal, but the grading was very poor indeed, only eight carloads out of a total of 326 going to contract."

Yours,
Philadelphia, Pa.

JOHN O. FOERING.

THE BUFFALO BLOCKADE.

Editor American Elevator and Grain Trade:—The following letter was published in the New York Tribune January 3: I noticed what you said about mule and steam power to tow boats in the Erie Canal, also Mr. Hickman's proposed electric motor system by two lines of wire. Now, no doubt, you are familiar with the Belgian cable craze a few years ago, and what a disastrous failure it proved to be. The Belgian cable system was confined to the canal. It did not tow the boats in the harbors and rivers, down Long Island Sound, and to Philadelphia, Baltimore, Norfolk, Richmond or to Washington, where our present steam canal boats are useful. If electricity could be used on all the inland waters where our present steam canal boats navigate successfully, it might supersede steam power. A steamer and three consort, which is an average rig, bring down from Buffalo 30,000 bushels of wheat, or 34,000 bushels of corn, or 55,000 bushels of oats, each trip, and some rigs made seven round trips this season. What is needed most to make a continued success of the Erie Canal is to restrict the notorious grain elevator robbers, and as laws and court decisions have no effect on them, why not apply the electric wires slightly on these gentlemen?

M. DE PUY.

After reading it some may think that I am too severe on elevator owners, but what are we going to do with such a grab all gang? Why, the charge against the grain is actually three-quarters of 1 cent a bushel higher since the McEvoy Bill was passed than before it was passed.

In the last issue of the AMERICAN ELEVATOR AND GRAIN TRADE you mention how railroad line boats were given the preference at elevators in Buffalo during the blockade last fall. Not only were individual vessel owners discriminated against, but Erie Canal boats were also shamefully delayed by the railroad grain elevator combination.

Another important item to mention is that the grain blockade and delay to vessels and canal boats could have been avoided had all the elevators in Buffalo been operated. There were twenty storage elevators and towers kept idle simply because they had no rail connection. This, without exception, is the worst outrage ever perpetrated on a civilized people, and it remains for the United States Supreme Court to say whether the daylight robbery shall continue or not.

Yours sincerely,

CAPT. M. DE PUY.

New York, N. Y.

A REPLY FOR "CONSIGNOR."

Editor American Elevator and Grain Trade:—In your last issue of December 15 the communication signed "Consignor" needs a reply, and for fear it may be overlooked by your regular correspondent, we will endeavor to put "Consignor" right. It is not the custom of respectable commission firms to be slow in sending advances after receipt of bills of lading, but to decide at once as to amount of advance, and send it same day.

The firm that sends "small amounts day after day, etc.," is not treating the shipper fairly; but the amount should be sent in one lump, and without delay, "Consignor" should not blame commission merchants for refusing to honor drafts if they call for amount in excess of value of property represented by bills of lading attached (leaving fair margin) based on the documents in hand and market price, unless he is a regular shipper and gives the commission firm collaterals and sufficient business to make it an object.

As to the suggestion for commission men at central markets to agree on a fixed percentage of the market price of the contract grade of his grain ruling in the mar-

ket the day he ships, shows how impractical "Consignor" is. How is the commission man to know how this grain will grade before it arrives? The suggestion would be equally practicable for the shippers to fix by convention as to the amount proper to draw on shipments. We are inclined to think the trouble "Consignor" has experienced has been caused by his own carelessness. The shipper should not confine himself to any one market, but he should select some commission firm at each market that he can reach and give him all his business at that market, then the commission man would feel justified in keeping the shipper well posted. In time he could build up a credit with that commission merchant, who in return would furnish him with all the capital that he might require for legitimate purposes. We would suggest to "Consignor," and all others affected in the same way:

First—Make inquiries through your local bank and merchants as to the financial and commercial standing of the commission firm you contemplate patronizing, and should they not stand well, do not ship them. Second—Write the firm on the day of shipment stating the number and initial of cars shipped, and kind of grain, with your honest opinion as to how it will grade upon arrival and amount of your draft against the shipment. Third—Inclose weight certificate for car shipped, giving draft-weight, and signed by the person who weighed the grain, whoever he may be, and whether or not it is to apply on sale for future, for your account, to be sold upon arrival, to hold for a fixed limit or whatever instructions you wish to give regarding the disposition of it. Fourth—Insist on the railroad agent inserting the freight rate in the bills of lading. Fifth—Indorse the bill of lading.

Follow these simple suggestions, and if your drafts leave a margin of, say, three cents per bushel on wheat, and two cents per bushel on corn and oats (unless markets are wild and fluctuations rapid), and your commission merchant kicks, then it is time you were trying another firm.

There is any number of good commission firms in every market, and just as soon as you find one that will not treat you fairly, look over the ground carefully and see if you have treated him fairly, and if so, close your account with him, and try another. If you want the names of good firms write the superintendent of the chamber of commerce or the postmaster of the place, and the chances are that you will find him.

We hope these suggestions may be of benefit to some consignors.

Yours truly,

MAGUIRE & Co.

Cincinnati, O.

THE CANADIAN OAT TRADE.

Considerable quantities of Canadian oats have been exported to Great Britain since the close of navigation via Portland and Boston, but owing to the decline in prices on the other side and the maintenance of prices here, there has been less business of late for export. Country buyers have persisted in keeping up the market by taking in deliveries at current rates, notwithstanding that the price of oats in London had declined from 22s. to 19s., and now considerable accumulation exists at different country points, which are held for higher prices than shippers can afford to pay. It is stated that Manitoba has a large quantity of oats for export, but that they are held at too high prices to admit of their being moved at present. In this market there have been sales of car lots of Quebec oats at 34½ to 35 cents per 34 pounds, but No. 2 Ontario oats would cost 36 to 37 cents to lay down here to-day. Owing to a material drop in through freight rates, there has been more export inquiry for oats in the West recently, and if it continues of course smaller supplies from Ontario will find their way to this market. Farmers in this province and Ontario have still large deliveries to make, the bad roads, owing to absence of snow, having prevented deliveries in many districts. Manitoba, Quebec, and Ontario having large crops of oats, it is, of course, essential that an export trade should be encouraged in order to work off the surplus.—*Montreal Trade Bulletin.*

Three small-grained varieties of common wheat were cultivated by the first lake-dwellers of Switzerland. It was also cultivated by the people of Italy and Hungary in the time of the Stone Age, and by the Egyptians as long ago as 3359 years B. C., this latter fact being proved by a grain of wheat found embedded in one of the bricks of the pyramids, to which the above date has been assigned.

THE SEPARATOR: ITS ADVANTAGES AND LOCATION.

BY R. JAMES ABERNATHEY.

Of all the machines used in elevators, large and small, the separator, of some style, is the most useful and universal. It can be safely said that no kind of a power grain house or elevator can be considered entirely complete without a separator. It is rare indeed that such a machine cannot be made useful; most of the time it is actually indispensable when successful and profitable grain handling is the object, and it is fair to assume that all who engage in the business expect to make it both successful and profitable, though perhaps proceeding on different lines.

Some new beginners are apt to think that grain handling is a very simple business, requiring but little skill or preparation, and less useful machinery. Of course they learn by experience, but sometimes too late to be of benefit to them. But both the young and the old hands in the business must learn, if they have not already learned, that a separator is of prime necessity, and should be in every house. The chief function of a separator is to clean dirty grain, and there is no season in any section of country where more or less of the grain is not at times dirty enough to make cleaning both satisfactory and profitable, hence such a machine should be on hand to meet emergencies.

The separator is useful for other purposes also. Low grades of wheat, especially, can be raised by the judicious use of a separator, and the additional value of higher grade wheat secured by the dealer. It may not always be advisable to raise a low grade of wheat bodily; it may not be practical to do so; but it is a very common practice to clean and mix Nos. 2 and 3 wheat by judicious handling with the separator, to make No. 2 of the whole. If the No. 2 is in good natural condition, and the No. 3 prime, more 3 and less 2 need be used in making No. 2 of the whole. However, that part of it is always subject to circumstances and to the judgment of the operator or manager of the house, who in all cases ought to be a man of skill in his line, and of rare good judgment as well, for if good

judgment is of use anywhere it is in an elevator where grain of all kinds and conditions is being constantly handled.

A separator is also useful for handling damp grain. The air currents of the machine tend to dry it, and unless quite wet, damp wheat can be well cured by running it through the machine at proper intervals, and often enough. Keep changing it from one bin to another, running it through the separator each time, being careful to have the valves closed after the first two or three operations to avoid waste by drawing out the lighter and smaller grains of wheat with the fan. It is not advisable to use blast machines of any kind in a house that has either steam, water, or any other regular power. Blast machines can be used in horse power houses, because suction machines cannot be operated with entire satisfaction with such power. Suction machines should be the reliance in all regular elevators.

The location of separators is sometimes a disturbing factor, as the operator feels uncertain as to whether he prefers it at the top or on the first floor of the house. In houses of any size it is better to have the machinery at the top of the house. In very small houses where one man is expected to do all the work the first floor is the most convenient location. The screens of a separator have to be watched carefully and constantly, especially when cleaning very dirty wheat, and should be under the eye of the operator, and when one man only is employed the first floor is the place. As may be readily understood by

those unacquainted with such machines, if the screens are allowed to fill up with dirt, sticks, weeds, etc., the wheat will run over the tail and be wasted. When help is plenty, and a man is needed at the top of the house most of the time, the top is the place for the machines, because simpler and generally better machinery arrangement can be secured.

All separators should be of the adjustable type and have screens enough for cleaning all kinds and conditions of grain. By changing screens dirty wheat can be cleaned slower, but much better. A re change will clean good wheat faster and well enough, and so on.

EUROPEAN GRAIN TARIFFS.

The last agricultural report gives from the latest consular report the tariffs which European countries assess on grain and flour.

In this list Portugal leads, as the grain there is under government control and buyers are forced to use up all the home product before foreign grain is admitted.

Germany comes next, and the duty is large, but a short time since a treaty was negotiated with Austro-Hungary

PHILADELPHIA ELEVATORS.

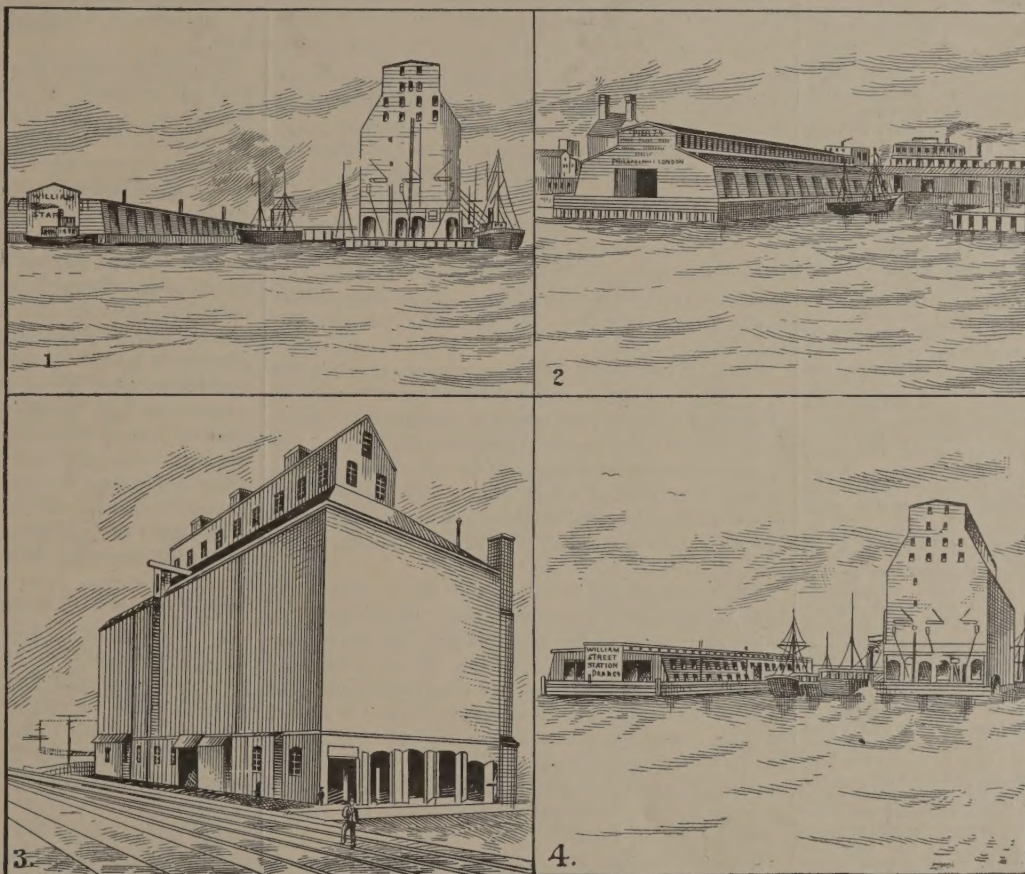
Philadelphia merchants are making strenuous efforts to recover that city's lost export grain trade, and not without some degree of success, as is shown by reports published in these columns from time to time of the grain handled at that port. New steamship lines have been established recently which will give that city much greater facilities for shipping grain.

The port has ample grain handling facilities. The grain elevators and piers of the Philadelphia & Reading Railway are shown in the accompanying illustration. The Williams Street Station and Pier are represented by cut 1. Pier 2, north wharves for inward cargoes, is represented by cut 2. The Twentieth Street Elevator, shown in cut 3, is for local business. It is located at the corner of Twentieth street and Pennsylvania avenue, with direct connections with the Philadelphia & Reading Railroad, has a storage capacity of 400,000 bushels, and all facilities required for the receipt, storage and delivery of any quantity of grain to the miscellaneous local trade, 450 wagon loads per day having frequently been delivered. It is also provided with blowing and screening machinery to clean grain when required.

The Port Richmond Elevator, shown in cut 4, handles principally export business. It is located on a pier 600 feet in length on the property of the Philadelphia & Reading Railroad, at the foot of Ann street (Delaware River). It has a storage capacity of 900,000 bushels, and in proportion to its size has larger elevator and machinery facilities than any on the Atlantic coast, 350 carloads having been handled in nine hours, and 54,500 bushels were loaded on board steamer in fifty-seven minutes. It is supplied with eighteen elevator legs, each of a capacity of 4,000 bushels per hour, making a total of 72,000 bushels per hour, and twenty-four cars can be delivered at one shift; unloading legs to discharge water-borne grain into store are also supplied, and it is equipped with suction fans and screens attached to each receiving elevator to clean grain on receipt when required. Twenty-four 1,000-bushel hopper scales enable a continuous flow of grain to be made either inward

or outward, and steamers can be berthed and loaded simultaneously.

The Tradesmen's Grain Elevator and Storage Company is at 216 to 226 North Twenty-third street, and has filled a previously long-felt need of a grain elevator and storage warehouse in that locality, which was effected by the organization of the company in 1889. The plant is constructed in the most substantial manner, and has a capacity for the storage of 125,000 bushels of grain, 30,000 barrels of flour, 2,000 tons of hay and straw, and for 75 carloads of miscellaneous freight. Connections are maintained with the Baltimore & Ohio and with the Philadelphia & Reading systems, which makes tributary to the company all the territory covered by those two vast railway lines, and they contemplate erecting additional buildings to provide for their increasing business. One of the features of the service is that each car of grain will be stored separately when practicable. The company has a capital of \$200,000, and issues negotiable certificates, and effects insurance on merchandise stored in its elevator. Mr. Harry K. Cummings, the president, is of the firm of Leonard & Cummings, the grain firm of Charles A. Cummings, and the owner of the extensive mills at No. 218 North Twenty-third street. Mr. F. R. McCaskey, the secretary, and Mr. Harry K. Cummings, treasurer, have both had an extended business experience, and Mr. T. L. Hibbard, the superintendent at the elevator and warehouse, is an efficient executive.



PHILADELPHIA ELEVATORS.

whereby a special rate was made on grain from the latter country. It is understood that a special rate fully as good, if not better, will be given this country after February 1.

We give the figures for the different countries per 100 kilos of 220.4 pounds, or lots of 3½ bushels.

Countries.	Wheat.	Flour.	Corn.	Oats.	Rye.	Barley.
Austro-Hungary.....	\$0.72	\$1.80	\$0.24	\$0.66	\$0.72	\$0.36
France.....	.97	1.15	free	.....	.58	.29
Germany.....	1.19	2.50	.48	.95	1.19	.54
Italy.....	1.06	1.68	.24	.77	.24	.24
Portugal.....	1.72	2.46	1.51	1.51	1.51	1.51
Spain.....	1.54	2.55	.....	.....	.....	.....
Sweden.....	.64	1.15	.67	2.68	.67	.67
Russia.....	.....	.36	.....	.....	.....	.....
Switzerland.....	.39	.29	.39	.39	.39	.39

The stocks of grain at New York on Saturday, January 9, were as follows: Wheat, 6,920 bushels; corn, 1,471,562 bushels; oats, 1,184,322 bushels; rye, 873,136 bushels; barley, 124,418 bushels; wheat afloat, 328,000 bushels.

Baltimore received in 1891, over the B. & O. Railroad. 8,039,498 bushels of wheat, 2,962,434 bushels of corn, 2,173,417 bushels of other grain, and 1,776,560 barrels of flour, against 2,303,385 bushels wheat, 7,862,970 bushels corn, 2,555,066 bushels other grain, and 1,384,196 barrels of flour in 1890.

THE WASHBURN ANTI-OPTION BILL.

A bill has been introduced in the United States Senate by W. D. Washburn of Minnesota, which is intended to stop option dealing in farm products. It is as follows:

SECTION 1. Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, that for the purpose of this act the word "options" shall be understood to mean any contract or agreement whereby a party thereto, or any party for whom or in whose behalf such contract or agreement is made, contracts to have or give to himself or another the option to buy or sell at a future time any of the grain or other commodity mentioned in section 3 of this act.

SEC. 2. That for the purpose of this act the word "futures" shall be understood to mean any contract or agreement whereby a party agrees to buy, or agrees to sell and deliver, at a future time to another any of the articles mentioned in section 3 of this act, when at the time of making such contract or agreement the party agreeing to make such delivery, or the party for whom he acts as agent, broker or employee in making such contract or agreement, is not at the time of making the same the owner of the article so contracted and agreed to be delivered, or unless the article so contracted to be sold and delivered shall subsequently be actually delivered to the purchaser for manufacture or consumption. Provided however, that this act shall not apply to any contracts or agreements for the future delivery of any of the said articles made with the United States, or any state, county, or municipality, or with the duly authorized officers or agents thereof, nor to the contracts or agreements made by farmers for the sale and delivery of any of the articles aforesaid which are in actual course of production by such farmers at the time of so making such contract or agreement.

SEC. 3. The articles to which the foregoing section relate are wheat, corn, oats, rye, barley, cotton and all other farm products; also, pork, lard and all other hog products.

SEC. 4. That special taxes are imposed as follows: Dealers in "options" or "futures" shall pay annually the sum of \$1,000, and shall also pay the further sum of 5 cents per pound for each and every pound of cotton or pork, lard, or other hog products, and the sum of 20 cents per bushel for each and every bushel of any of the other articles mentioned in section 3 of this act, and the right and privilege of delivering which may be acquired under any "options" contract or agreement, as defined by section 1 of this act, or which may be sold to be delivered at a future time or period, under any "futures" contract or agreement as defined in section 2 of this act, which said amounts shall be paid to the collector of internal revenue, as hereinafter provided, and by him accounted for, as required in respect to other special taxes collected by him. Every person, association, copartnership, or corporation who shall, in their own behalf, or as broker, agent, or employee of another, deal in "options" or make any "options" contract or agreement as hereinbefore defined, shall be deemed a dealer in "options," and every person, association, copartnership, or corporation who shall, in their own behalf, or as broker, agent, or employee of another, deal in "futures" or make any "futures" contract or agreement, as hereinbefore defined, shall be deemed a dealer in "futures."

SEC. 5. That every person, association, copartnership or corporation engaged in, or proposing to engage in, the business of dealer in "options" or dealer in "futures" as hereinbefore defined shall, before commencing such business, or making any such "options" or "futures" contract or agreement, make application in writing to the collector of internal revenue for the district in which he proposes to engage in such business, or make such contract or agreement, setting forth the name of the person, association, partnership or corporation, place of residence of the applicant, the business engaged in, and where such business is carried on, and, in case of partnership, association or corporation, the names and places of residence of the several persons constituting the same and shall thereupon pay to such collector the sum aforesaid of \$1,000, and shall also execute the deliver to such collector a bond in the penal sum of \$5,000, with two or more sureties satisfactory to the collector, conditioned upon the full and faithful compliance by the obligor therein with all the requirements of this act. And thereupon the collector shall issue to such applicant a certificate, in such form as the commissioner of internal revenue shall prescribe, that such applicant is authorized, for the period of one year from the date of such certificate, to be a dealer in "options" or "futures" and to make "options" or "futures" contracts or agreements, as hereinbefore defined, and for the period specified in such certificate the party to whom it is issued may conduct the business of dealer as aforesaid. Such certificate may be renewed annually, upon compliance with the provisions of this act, and any "options" or "futures" contract or agreement as defined by this act, shall be absolutely void as between the parties thereto and their respective assigns, unless the party making such contract or agreement shall have, at the time of making the same, a certificate, as aforesaid, authorizing the making thereof.

SEC. 6. That it shall be the duty of the collector to keep in his office a register containing a copy of each and every application made to him under the foregoing section, and a statement in connection therewith as to whether a certificate has been issued thereon, and for what period, which book or register shall be a public record and be subject to inspection of any and all persons desiring to examine the same.

SEC. 7. That every "option" or "futures" contract or agreement, as hereinbefore defined, shall be in writing and signed in duplicate by the parties making the same, and any such contract or agreement not so made and signed shall, as between the parties thereto and their assigns, be absolutely void.

SEC. 8. That it shall be the duty of every person, copartnership, association or corporation, on the first day of the week next succeeding the date of the certificate issued to them, and on the first day of every week thereafter, to make to the collector of the district in which any "options" or "futures" contract or agreement has been made, full and complete return and report, under oath, of any and all such contracts or agreements made or entered into by such persons, copartnership, association or corporation during the previous week, together with a statement of the article or articles embraced in or covered by such contracts or agreements and the amounts, respectively, of each, and the name of the party or parties with whom such contracts or agreements have been made, and, at the same time, to pay such collector the amount of the tax hereinbefore required of

5 cents per pound on each and every pound of cotton, and of pork, lard or other hog products, and of 20 cents per bushel on each and every bushel of any of the other articles mentioned in section 3 of this act which are the subject of, or covered by, such contracts or agreements or any of them, for which sums such collector shall give his receipt to the party so paying, and the sums so collected shall be accounted for by the collector, as provided by law in respect to other taxes collected by him.

SEC. 9. That every person who shall, in his own behalf or in behalf of any other person, association, partnership or corporation, enter into any "options" or "futures" contract or agreement as defined by this act, without having a certificate of authority from the collector, as hereinbefore provided, and covering the time at which contract or agreement shall be made, shall, besides being liable for the amounts prescribed in section 4 of this act, be fined not less than \$1,000 and not more than \$5,000 for each and every such offense. And every person who shall make to the collector a false or fraudulent return or report required by section 8 of this act shall be subject to a fine of not less than \$1,000 and not more than \$5,000 or to imprisonment for not less than thirty days nor more than six months, or to both such fine and imprisonment.

SEC. 10. That neither the payment of the taxes required nor the certificate issued by the collector under this act shall be held to exempt any person, association, copartnership or corporation from any penalty or punishment, now or hereafter provided by the laws of any state for making contracts or agreements such as are hereinbefore defined as "options" or "futures" contracts or agreements, or in any manner to authorize the making of such contracts or agreements within any state or locally contrary to the laws of such state or locality; nor shall the payment of taxes imposed by this act be held to prohibit any state or municipality from placing a tax or duty on the same trade, transaction, or business for state, municipal or other purposes.

The strongest opposition to the bill comes from the Senator's own state. The elevator men and grain dealers of Duluth and Minneapolis have declared against it, and the bankers of Minneapolis and St. Paul have taken steps to defeat it. Country newspapers and many journals devoted to agricultural interests are naturally in favor of the bill. They are prompted to favor it because those of the cities oppose it. The countryman generally possesses the idea that the commercial exchanges of the cities are only large bucket shops, like those established in his town, and which take no part in establishing markets. Few editors have not commented upon the bill. The following are some of the opinions:

Senator Washburn of Minnesota explains that his bill to regulate gambling in wheat is not designed to prevent all dealing in futures, but simply to abolish the "pernicious, demoralizing practice known as selling short." If he can accomplish what he wants he will remove a great cause of depression in wheat prices. The question remains whether "corners" might not be more easily made and maintained in the absence of short operations.—*Bulletin, San Francisco*.

Mr. Washburn may as well save his labor. Such a bill as he has introduced cannot be passed. Of course no one wants to antagonize the great milling interest of this country. Why should the milling interest attempt to suppress grain trading? This kind of legislation attempts to array one trading interest against another. It cannot be done. While there may be objectionable features in the present method of trading in futures, they are largely overbalanced by its benefits. In this world nothing can be made perfect. The tares must grow with the wheat.—*Market Report, Toledo*.

If the bill becomes law, it necessarily widens in its effects the difference in price between producer and consumer, for, with none to buy but a limited class, that class, like others with opportunities, would not neglect to improve them. The bill would be more appropriately named if it were designated a bill to limit the classes of people that might buy farm products.—*Market Record, Minneapolis*.

There is no grain nor milling concern in the Northwest with capital enough to stand "pat" on its share of purchases without some sort of assurance of the character supplied by future sales. If they are made impossible without supplying a suitable substitute, a business wrong would be perpetrated that would fall at last upon the producer in the form of cheaper grain at the farm.—*Minneapolis Market Record*.

Boards of trade in providing a market for the farmers' grain before the grain is harvested, do a very useful work. They bring the farmer instantly in touch with a market of vast extent, and make it possible for him to sell his wheat immediately at such a rate as the world's market affords. Of course if Senator Washburn can stop harmful grain gambling, and at the same time protect from harm legitimate trades in futures, he will accomplish a good work. But if he is seeking to make a good law for millers he may succeed in doing great harm not only to boards of trade, but to farmers as well.—*Chicago News*.

The Minneapolis Chamber of Commerce have had an indignation meeting over Senator Washburn's anti-option

bill. President Sawyer was among the speakers. He said: "The millers can't possibly take 50 per cent. of the wheat the farmers have to sell. The elevator men who buy it must seek another channel for disposing of it, which must be by export, as all other buyers are wiped out of existence. There can be but one result, and that is very much cheaper wheat. It forces the elevator men either to hold the wheat where the miller can't take it, or sell it for export at any price the exporter sees fit to pay. The bill is so ridiculous that most thinking men feel there is no danger of its passage. At the same time it is having its effect on the market now, and the more it is agitated the lower the market must sell. There are now practically 75,000,000 bushels of wheat being carried in the visible and invisible supply, and nearly all sold for May delivery. When the purchasers of the May delivery learn they can sell this 75,000,000 and the accumulations, now about 1,500,000 a week, only to millers and exporters, I think there will be such a slaughter of wheat as was never known in the markets of the world before, as these purchasers are small dealers, outside of elevator companies, who are not able to furnish the money and carry the cash wheat market the miller wants. The result must be that wheat must drop to a point where the miller and the capitalist feel it is cheap enough to carry as an investment."

The market Senator Washburn seems so anxious to abolish is precisely the place in which is carried the financial account of the wheat stored in the elevators of Minneapolis and other cities, and held there during the time that intervenes after the grower has sold it and before the consumer wants to purchase. The proprietors of those establishments might be able to otherwise command the use of capital with which to carry the property but if they did so, and had to face the greater risk of falling prices while it was in their keeping, they would have to charge a wider margin than they do now, and any business man would say they were justified in doing so. It is open to question if either the farmer or the miller would be benefited by the change.—*Chicago Tribune*.

In its practical operation, legislation such as is proposed by Senator Washburn would be of direct money benefit to the millers, and apparently to no other class, as it would give them 20 cents a bushel leeway in competition with speculators. If "wind" speculation is wrong on principle, or if the system has been abused to the injury of the producers, then neither licensing nor taxation will legitimize it. A wrong cannot be made a right in any such manner.—*The Economist*.

Mr. W. T. Baker, ex-president of the Chicago Board of Trade, said recently: "I have not seen Senator Washburn's bill, but I think I understand its character, and I regard legislation of that nature as pernicious and unjust instead of reformatory. The farmer will suffer most by it, not those who are talked of as his enemies, for if they are prohibited from dealing in 'options' they can readily turn themselves to something else, while his confines are limited and he must hold his products unless a consumer or manufacturer comes along and buys them. If I owned an immense flour mill I would favor such a bill. It may be true that when the market is low the situation is accentuated by short selling, but there soon comes a reversal that more than evens things up. Without the commission merchant and his methods it would be impossible to market the almost inexhaustible grain products of this country. We want no legislation to clog trade and legitimate venture, for the effect could only be pernicious."

It may have occurred to Mr. Washburn that a combination of millers would go very well along with an act driving everybody else out of the market as a purchaser of grain, and that an act prohibiting any such combination would be inconvenient.—*Chicago Herald*.

The claim that dealings in "futures" are "equalizers of prices is a pure fiction. On the other hand there is no doubt of the grave injury which is done or may be done to the producer by purchases and sales on paper. The value of a crop may be lowered to an extent that costs the farmers millions of dollars by transactions which are mere gambling operations, having nothing whatever to do with any actual products of the fields?—*Pioneer Press, St. Paul*.

We desire to challenge the accuracy of the charge that dealings in "futures," as conducted at the Chicago Board of Trade or the New York Produce Exchange, have ever, in any appreciable degree (with possibly rare and only temporary exceptions), depressed prices of foodstuffs to the loss of the producer, and, on the other hand, to deny

that prices have ever (with like exceptions) been unwarrantably advanced to the material prejudice of the consumer of those products. On the other hand, it appears to us quite easy of proof that the system of trading in futures, as understood by the commercial bodies named in the foregoing, goes far to equalize prices of various staples the world over, to the material benefit of the consumer as well as producer, to make and maintain markets and to gather and disseminate all data going to govern the same. In short, that the advantages of the system are greater than the disadvantages. Gambling and speculation are quite different, but there are those who are too lazy or who do not stop to discriminate. By such, much of the opprobrium attaching to gambling has been permitted to attach itself to speculation.—*Bradstreet's*.

A law of this kind would be very likely to destroy entirely the business at which it is aimed, and of course this is the purpose. It is undoubtedly desirable that there should be some check or restraint upon speculation in food products, but it is proper to observe that it is by no means a universal opinion that the dealings which it is the design of Senator Washburn's bill to put an end to are an absolutely unmixed evil. Nevertheless, they are a species of gambling which legislation ought to take notice of, and the most practicable way of removing them, or at any rate of reducing their operation to such limits that the least possible mischief may result, is to heavily tax them.—*Omaha Bee*.

REVIEW OF GRAIN MARKETS.

The receipts of wheat flour at Baltimore for the year just closed amounted to 3,099,339 barrels, against 3,369,831 barrels in 1890; exports 2,736,153 barrels, against 2,753,628 barrels in 1890. Receipts of wheat 18,693,394 bushels, against 6,378,638 bushels in 1890; exports 16,061,283 bushels as compared with 4,785,142 bushels in 1890. Receipts of corn were 6,928,096 bushels, against 21,903,894 bushels in 1890; exports 3,765,887 bushels, against 18,961,871 bushels in 1890. Receipts of oats were 1,687,112 bushels, against 2,556,630 bushels in 1890. Receipts of rye were 1,206,813 bushels, against 469,880 bushels in 1890, and the exports were 732,937 bushels, against 28,859 bushels in 1890. Receipts of barley and malt were 299,538 bushels, as against 772,177 bushels in 1890.

Kansas City received during 1891 17,500,000 bushels of wheat, 10,500,000 of corn, 6,000,000 of oats, and 1,500,000 of rye, against 6,133,000 bushels of wheat, 18,000,000 of corn, 4,750,000 of oats, and 335,000 of rye in 1890.

Exports of wheat and flour from San Francisco, Cal., for the year 1891, the flour being reduced to wheat cents, aggregated 20,644,000 cents, of the value of \$33,105,000, as against 16,586,000 cents, of the value of \$22,114,000 for the year 1890. During the eleven first months of the year 18,507,800 cents were exported, against 14,924,600 same period of 1890, and 13,559,400 for eleven first months of 1889.

The record of grain received and shipped at Chicago for twelve months is remarkable. The previous year exceeded two years ago by 31,000,000 bushels in grain received. The past year goes ahead of 1890. The greatest gain has been in wheat with receipts of 43,000,000 bushels compared with 18,000,000. In corn receipts were 68,000,000 bushels compared with 95,000,000 bushels the previous twelve months. Receipts of rye were much more than double, reaching over 8,000,000 bushels. In the matter of shipments the record is even more surprising in some particulars. Wheat again more than doubled while corn fell 16,000,000 short. Rye inspected out at this point 5,573,000 bushels, against 1,666,000 the previous twelve months. In the total movement, receipts and shipments, the volume was in round numbers 300,000,000 bushels, compared with 290,000,000 for the year 1890. The following exhibit gives the grain movement for the year ending November 1 with a comparison for twelve months ending the same date 1890:

INSPECTION ON ARRIVAL.

	1891.	1890.
Winter wheat, bushels.....	27,793,776	9,126,046
Spring wheat, bushels.....	15,127,138	9,320,480
Corn, bushels.....	68,283,523	94,991,620
Oats, bushels.....	75,404,372	74,605,000
Rye, bushels.....	8,185,375	3,085,000
Barley, bushels.....	11,042,163	13,378,000
Total.....	205,836,347	204,506,701

INSPECTION FROM STORE.

	1891.	1890.
Winter wheat, bushels.....	23,127,995	4,108,000
Spring wheat, bushels.....	8,048,566	4,090,000
Corn, bushels.....	41,218,563	57,285,000
Oats, bushels.....	14,161,975	16,839,000
Rye, bushels.....	5,573,607	1,666,000
Barley, bushels.....	2,079,177	1,753,000
Total, bushels.....	94,209,883	85,744,000

Of grass seed 68,163,240 pounds were received, and 55,148,971 shipped, against 72,086,100 and 59,213,036 pounds respectively for 1890. Broom corn receipts were 20,685,354 pounds, against 14,524,233 in 1890, and the shipments were 15,750,529 pounds, against 15,395,873 in 1890.

Nearly 51 per cent. of all the grain received was placed in store here. For the twelve months ending Oct. 31, 1890, only 46 per cent. went to store, the rest being either through-billed, sold on 'Change and reconsigned East, taken to private warehouses, or sent into consumption in the city. The average loading or capacity of the cars changed but slightly during the year, and is reported at about 727 bushels. Since 1877 it has increased within a fraction of 75 per cent., as the average carload of grain in that year was only 416 bushels.

OATS PRODUCED BY EACH STATE.

The statistician of the Department of Agriculture estimates the area, product and value of the 1891 crop of oats in each state as follows:

States.	Acres.	Bushels.	Value.
Maine.....	99,601	3,446,000	\$1,550,788
New Hampshire.....	31,359	1,068,000	504,880
Vermont.....	107,657	4,037,000	1,655,227
Massachusetts.....	23,275	768,000	360,995
Rhode Island.....	6,741	226,000	106,137
Connecticut.....	38,239	1,147,000	516,227
New York.....	1,329,984	41,894,000	15,919,908
New Jersey.....	138,706	3,884,000	1,553,507
Pennsylvania.....	1,239,101	39,704,000	12,470,312
Delaware.....	24,078	489,000	190,625
Maryland.....	111,944	2,127,000	808,236
Virginia.....	618,404	6,617,000	2,712,988
North Carolina.....	538,938	5,120,000	2,611,155
South Carolina.....	385,361	4,085,000	2,491,744
Georgia.....	618,626	7,238,000	4,342,754
Florida.....	52,469	598,000	370,851
Alabama.....	405,344	5,188,000	3,113,042
Mississippi.....	325,793	3,747,000	2,173,040
Louisiana.....	51,542	634,000	329,663
Texas.....	652,059	15,975,000	7,508,460
Arkansas.....	299,708	4,945,000	2,076,976
Tennessee.....	614,483	5,960,000	2,384,194
West Virginia.....	137,844	2,385,000	953,880
Kentucky.....	441,894	8,175,000	3,024,764
Ohio.....	911,292	28,523,000	9,412,735
Michigan.....	931,677	30,280,000	9,689,411
Indiana.....	895,067	21,034,000	6,730,904
Illinois.....	3,068,930	111,095,000	31,106,674
Wisconsin.....	1,481,919	49,348,000	13,817,413
Minnesota.....	1,425,080	52,015,000	14,044,163
Iowa.....	2,795,003	102,577,000	26,669,919
Missouri.....	1,158,308	27,568,000	7,994,642
Kansas.....	1,237,740	37,132,000	10,025,694
Nebraska.....	1,368,977	48,599,000	11,177,697
California.....	84,786	2,416,000	1,449,841
Oregon.....	233,037	7,341,000	3,009,673
Colorado.....	109,790	3,579,000	1,360,079
North Dakota.....	496,926	16,667,000	4,328,255
South Dakota.....	724,092	23,388,000	5,847,043
Idaho.....	37,898	1,326,000	603,215
Montana.....	94,747	3,648,000	1,750,925
New Mexico.....	16,330	359,000	197,593
Utah.....	39,646	1,288,000	541,168
Washington.....	173,466	6,744,000	2,764,920
Total.....	25,581,861	738,304,000	\$232,312,267

YIELDS OF DIFFERENT VARIETIES OF OATS AND BARLEY.

Experiments at the Government Agricultural Farm near Guelph, Ont., last season, with different varieties of oats and barley, gave the following results:

In oats 116 varieties were grown in 1891. Of the 84 varieties which have been grown side by side during the last three years, the following eight varieties have given the highest average yields:

Variety.	Weight per measured bushel. Pounds.	Yield per acre. Bushels.
Jeannette black.....	35%	85.2
Chruailles black.....	35 9-10	81.0
Black Etamper.....	36%	79.9
Houdan black.....	35%	78.8
Siberian (white).....	37 4-5	77.8
Donebrog (white).....	34%	77.3
White Canadian.....	34%	77.1
Poland white.....	40%	75.9

The first four varieties were imported from France. They are somewhat less than the average in length of

straw, and grow more thickly than most varieties. They shell very readily when ripe. Some extraordinary yields have been obtained, thus as in the case of the magnet, Poland white and golden giant, which went over 100 bushels per acre.

In barley 67 varieties were grown in 1891. Of the 37 varieties grown side by side for three years, the following five varieties have given the highest average yields, and these also are imported varieties:

Variety.	Weight per measured bushel. Pounds.	Yield per acre. Bushels.
Maud Schewis.....	50 7-8	59.1
Chevalier.....	52 5-12	49.8
Empress.....	52%	54.1
Hallett's pedigree.....	53%	53.0
Oderbrucker.....	53%	52.5

The first and the last mentioned varieties are six-rowed and the others are two-rowed.

It will be observed that these grains were grown on small plots, and some allowance should be made for this, as it is not probable that yields would be as large on the average farm. It should also be remembered that at the Guelph experimental station their doing so well is not of itself a sure guarantee that they will do so well in all parts.

Trade Notes.

"It pays to advertise when you have something to sell, and want people to know it."

The Laidlaw & Clark Hay Press Manufacturing Company of Cherokee, Kan., has been dissolved.

Honstain Bros., the well known elevator builders, have taken new quarters in the Berry block, Minneapolis, Minn., where they will be pleased to meet their old as well as new friends.

The Chicago Clutch and Machinery Company has been incorporated at Chicago, Ill. The capital stock is \$30,000, and the incorporators are Oliver H. Hurford, James J. Hoch and L. S. Koester.

The Willford & Northway Manufacturing Company of Minneapolis will, it is reported, build shops at Jordan, Minn., for the manufacture of special machines. A bonus of \$35,000 and five acres of land were given the company.

Charles Kaestner & Co. of Chicago are building a machine shop and machinery depot in Chicago. It is to be of brick, six stories high and 100x186 feet, with an L 59x93 feet. Their specialties are machinery and appliances for grain elevators, breweries, malt houses and distilleries.

When writing an advertisement do not tell half of what you could say, but intimate to the reader that you have in reserve other points which it would pay him to investigate. Tell the story quietly, easily, gracefully, convincingly and truthfully. Sink your personality behind that of the buyer. Do not urge him overstrongly.

Manufacturers will confer a favor on us by forwarding copies of their catalogues and circulars for 1892. Subscribers and others often write us for information in regard to a certain machine, or ask us who makes a certain article, and in such cases it is a decided advantage to have on file the latest printed matter of manufacturers in the line in question.

The Boston Belting Company held its annual meeting recently. The treasurer's report showed the net earnings for the year to be \$98,556 over and above all expenses. From this 12 per cent. dividends have been paid upon the capital stock of \$100,000, which calls for some \$84,000, leaving a cash surplus of \$14,536 for the year's operations. The old board of officers and directors was unanimously re-elected.

The Jeffrey Manufacturing Company of Columbus, O., known throughout the country as a manufacturer of malleable and steel roller chains, Hey Oborn and special chain, has added a line of link belting made from the company's own patterns, which will insure uniform pitch. These are made to work on standard sprocket wheels, and are interchangeable with other makes of corresponding numbers. This company claims to have the largest list of chains to select from in the world, and it would be to the interest of every user of chain to have its reduced price list, which can be had by addressing the company at Columbus, Chicago or New York.

CANADIAN PACIFIC ELEVATOR SYSTEM.

One of the advantages which the grain trade of America has, is the superior system of handling which is in vogue. This is an advantage which extends to the grower, as well as to the grain dealer, and which enables us to compete to good advantage with other grain exporting countries. In Russia, for instance, as well as in some other countries, there are vast areas of land well adapted to the growth of grain crops, but their system of handling the crops is not such as to encourage grain growing. Everything is of a more primitive scale than here. The facilities for rapidly and economically handling large quantities of grain, have not been carried to such a state of perfection, as on this continent.

While America in general takes the lead in the matter of grain handling facilities, there is no part of this continent where better facilities for handling grain exist, than in Manitoba. From the date of the opening of Manitoba to settlement, it was recognized that this region would be pre eminently a grain exporting country, and accordingly facilities for handling grain were provided from the start on the most modern system. The Canadian Pacific Railway management took the lead in this respect, and laid down such rules for the handling of grain as would lead to the establishment of a modern elevator system along their lines in Manitoba and the adjacent country westward from the Province. These rules provoked some hostility at first, and were considered rather too stringent, but time has demonstrated their wisdom. Manitoba has now a splendid system of country elevators, erected for the purpose of receiving grain from the growers, and the railway companies have done everything in their power to encourage the erection of modern styles of elevators along their lines.

Not only has the Canadian Pacific Company encouraged the erection of elevators at country points, but it has established an elevator system of its own, at terminal and transfer points. Grain marketed along the Canadian Pacific Railway in Manitoba is shipped Eastward over this road, and reaches the first transfer point at Fort William or Port Arthur, two ports on the northwestern coast of Lake Superior. During the season of navigation, most grain shipped Eastward is transferred from the cars at these ports and sent on by water, as the water freight rate is cheaper than by the all-rail route. It, therefore, became necessary to establish an elevator system at these ports to facilitate the transfer of grain from the cars to boats.

The first elevator was established at Port Arthur in 1883. This elevator has a capacity of 350,000 bushels. It has recently been leased to a private party, but will be operated as usual, for receiving, discharging, and storing grain.

It was recognized that the Port Arthur elevator would not long be equal to the growing demands of the Manitoba grain trade, and so in 1884 a second mammoth elevator was established at Fort William, and now designated Elevator "A." The limit capacity of this big structure is 1,260,000 bushels, which means an actual storage capacity of 1,250,000 bushels. This is a most substantial structure in every respect.

In the winter of 1887 a large flat warehouse was erected at Fort William, to provide temporary storage for the crush of grain, and the following summer Elevator "B" was built and was ready for operation by the fall of the same year. Elevator "B," which is illustrated herewith, has a capacity of 1,300,000 bushels. These Fort William elevators have been built on the most modern principles, and they are furnished with the latest improved machinery for handling and cleaning grain. They were erected under the supervision of Mr. Wm. J. Ross, superintendent of construction, etc., of the Canadian Pacific Company, who has also had general supervision over the erection of all the company's elevators. The shipping facilities at Fort William could not be better, the place being near the mouth of the Kaministiquia River. Boats from the lake can proceed up the river and moor right alongside the elevators, and a large cargo can be spouted into them in a very short time.

These Lake Superior elevators are designed for storage as well as for transfer purposes, hence their large capac-

ity. During the winter season a large quantity of grain is stored at these points, so that it may be shipped Eastward by water, after navigation opens in the spring.

An important point about an elevator is its ability to receive grain. That is, its ability to unload cars. In this respect the Fort William elevators are well equipped. The number of cars which can be handled in a given time, however, depends on the class of grain. There are separate bins in the elevators for different grades of grain, and where one car is of one grade, and the next car of another grade, and so on, it will take longer than if there were only one grade.

The elevator facilities will be extended at Fort William, as the requirements of the trade demand. The immense grain crop grown in Manitoba this year made it evident that more storage was required, and accordingly work was commenced last fall on an annex to Elevator "A." Work is now being pushed on this annex, and it is expected it will be ready to receive grain soon. Even with this addition to the storage facilities, it is evident that all the available space at Fort William and Port Arthur will be required this winter, and more too. The capacity of the annex will be about 1,250,000 bushels, so that when it is completed the total storage capacity at the two Lake Superior ports will be about 4,000,000 bushels. The annex is designed simply as a storage elevator, and it is without any machinery. It will be operated from the power of Elevator "A." While the increased storage capacity which will be afforded by this annex will be urgently needed, still it is the opinion among grain men



CANADIAN PACIFIC ELEVATOR "B" AT FORT WILLIAM, ONT.

that it would be much better if the annex had been supplied with loading and cleaning machinery, so as to be independent of Elevator "A."

Regarding the future extension of the company's facilities at our upper lake ports, we may say that it is altogether probable another large elevator will be erected at Fort William next summer. The rapid increase in the grain crops of Manitoba will no doubt necessitate this.

The next point Eastward where the Canadian Pacific Company has an elevator is at Owen Sound, Ont., a port on Georgian Bay, an arm of Lake Huron. The company has a line of steamships running between Fort William and Owen Sound. After having made the trip from Fort William to Owen Sound by water, the grain is again transferred to the cars at the latter port to be sent on Eastward either for export or for distribution to points throughout Eastern Canada. It therefore became necessary to have an elevator at Owen Sound to facilitate the transfer of grain from the boats to the cars. This elevator was designed by Mr. Ross, and erected in 1883. It has a capacity of 285,000 bushels. This elevator is not, properly speaking, a storage elevator, hence its more limited capacity. It is primarily a transfer elevator. It was therefore designed with a view of doing rapid work in handling grain. It has what is known as a marine leg, for unloading boats, and can handle 8,000 to 10,000 bushels per hour. It is a well built structure, and is one of the most complete of the company's elevators.

There are other lake ports East, such as Goderich, Sarnia, Kingston, etc., where elevator facilities exist for handling grain. The Owen Sound one, however, is the

only one established by the Canadian Pacific Company, and this elevator was established in view of Owen Sound having been selected as the Eastern terminal port of the company's upper lake steamship line. A great deal of grain is carried by water Eastward from Lake Superior ports by other steamers and vessels than those owned by the Canadian Pacific Company, and it may be taken to any Eastern port in the discretion of the shipper. The bulk of shipments the past fall from Fort William by water have gone to Buffalo, on Lake Erie, and thence by rail to New York, for shipment across the Atlantic.

The next point at which the Canadian Pacific Railway Company has established an elevator system is at the city of Montreal. During the season of open navigation on the St. Lawrence River, considerable grain goes to Montreal for export, and it is transferred from the cars at that port to ocean ships. Elevator "A" was built at Montreal in 1885, and operated early in 1886. It has a capacity of 650,000 bushels. Elevator "B" was erected in the same place in 1886. It has the same capacity as "A," but is of a more modern pattern. The work of this elevator is mostly unloading cars and discharging into ships; but by means of a floating elevator boats can be unloaded into the elevator.

The charges at Fort William are as follows, for summer storage: Charge for elevating from cars, including storage for twenty days, $1\frac{1}{4}$ cents per bushel; storage for each succeeding twenty days or part thereof, $\frac{1}{2}$ cent per bushel; cleaning and blowing, per bushel, $\frac{1}{2}$ cent; scouring, 1 cent per bushel. On November 15 winter storage begins. Grain placed in the elevator for winter storage is charged at the regular rate, until the amount of 4 cents per bushel is accrued against it, after which there is no further charge until the first of June. Grain remaining after the first of June is charged $\frac{1}{2}$ cent per bushel for each succeeding fifteen days, or part thereof. Grain placed in the elevator, before November 15, and remaining for winter storage, will be charged regular rates up to November 15, in addition to the four cent rate for winter storage.

At Owen Sound grain is elevated and stored free for ten days, after which 1 cent per month per bushel is charged.

At Montreal the charge for elevating, including storage for ten days, is $\frac{1}{2}$ cent per bushel for oats, and $\frac{3}{4}$ cent for other grains; storage for each succeeding ten days or part thereof, $\frac{1}{4}$ cent; turning grain, $\frac{1}{8}$ cent; cleaning, $\frac{1}{2}$ cent; mixing, $\frac{1}{4}$ cent per bushel. Winter storage begins November 15, and expires May 15, and between these dates, when charges accrue to $1\frac{1}{2}$ cents per bushel, no further charge is made.

After May 15 the regular charge of $\frac{1}{4}$ cent for each ten days, or part thereof, is again made.

Grain is taken into all the company's elevators on grade. It must therefore be inspected by the official grain inspector before being received. He holds the inspector's certificate of the grade of the grain, and he simply receives out a like quantity of the same grade as his certificate calls for. If he put in No. 1 hard wheat, he is entitled to receive out No. 1 hard, but not necessarily the exact grain that he placed in.—*The Commercial, Winnipeg.*

For the cut of Elevator "B" given herewith we are indebted to *The Globe* of Toronto.

A disease, destructive to the white grub, has been imported from Paris, France, by Prof. S. A. Forbes, Illinois State Entomologist. He is propagating the germs in his laboratory at Champaign, and will try them on chinch bugs.

Farmers in some parts of North Dakota and Minnesota claim that their climate is better adapted for barley growing than any part of the East south of the Canada line. They have grown a large crop there for the area in cultivation, and it is this that has kept prices down. But we doubt considerably whether in ordinary seasons these regions will not prove too dry for barley. Land where oats and wheat have often failed from drouth will not be safe to crop with a grain that is so easily ruined by hot, dry weather as is barley.—*American Cultivator.*

EXPORTS OF BREADSTUFFS DURING DECEMBER.

The total exports of breadstuffs, of grain and wheat flour during December, according to the report of the Bureau of Statistics, was as follows:

	New York.		Boston.		Philadelphia.		Baltimore.		New Orleans.		Principal Pacific Customs Districts. (a)		Total.	
	Quantities	Values.	Quantities	Values.	Quantities	Values.	Quantities	Values.	Quantities	Values.	Quantities	Values.	Quantities	Values.
BARLEY—Bushels.														
Month ending Dec. 31.....	1891 416,188	\$ 262,799	1890 8,286	\$ 7,457	.....	.....	.....	.....	.....	.....	144,992	\$ 86,992	560,466	\$ 357,228
Six months ending Dec. 31.....	1891 500,754	321,428	1890 19,612	15,014	.....	.....	.....	.....	.....	.....	1,374,576	895,001	1,894,942	1,231,143
.....	1890 8,342,682	4,424,412	1891 1,435,542	739,762	1,239,511	638,178	2,323,930	1,176,244	1,593,677	777,686	63,917	49,815	18,195,187	9,332,545
CORN—Bushels.														
Month ending Dec. 31.....	1891 1,904,320	1,235,145	1890 631,263	356,081	1,188,035	\$ 672,227	1,503,313	\$ 860,194	240,010	\$ 130,182	12,656	10,075	5,674,507	3,369,837
Six months ending Dec. 31.....	1891 9,398,250	6,241,351	1890 2,636,380	1,581,323	1,776,194	1,067,021	2,030,981	1,218,597	254,293	287,034	51,287	50,927	18,214,829	11,565,130
.....	1890 8,342,682	4,424,412	1891 1,435,542	739,762	1,239,511	638,178	2,323,930	1,176,244	1,593,677	777,686	63,917	49,815	18,195,187	9,332,545
OATS—Bushels.														
Month ending Dec. 31.....	1891 1,351,844	585,670	1890 20,009	9,007	309,832	123,960	.....	.....	28	18	4,939	2,330	2,771,392	1,178,549
Six months ending Dec. 31.....	1891 2,672,040	1,173,574	1890 30,977	12,557	309,857	123,970	184	97	1,093	543	23,242	11,319	4,579,961	1,950,321
.....	1890 434,451	172,171	1891 22,107	7,319	2,302	1,166	66	32	352	167	35,997	20,359	762,743	298,520
RYE—Bushels.														
Month ending Dec. 31.....	1891 728,161	742,957	1890 29,848	22,250	.....	.....	54,685	50,310	75,033	64,423	47,428	49,134	905,307	906,824
Six months ending Dec. 31.....	1891 4,173,825	4,089,084	1890 105,390	88,989	.....	.....	796,577	766,808	306,566	267,474	167,168	146,401	7,882,703	7,404,527
.....	1890 308,627	194,611	1891 1,435,542	739,762	1,239,511	638,178	2,323,930	1,176,244	1,593,677	777,686	63,917	49,815	18,195,187	9,332,545
WHEAT—Bushels.														
Month ending Dec. 31.....	1891 6,924,134	7,484,120	1890 294,044	310,533	541,788	581,711	1,897,727	1,957,180	1,063,076	1,129,312	4,814,192	5,094,010	15,662,996	16,686,301
Six months ending Dec. 31.....	1891 37,895,999	40,705,098	1890 1,852,144	1,914,274	6,461,935	6,908,203	4,734,151	15,283,958	8,522,835	9,072,364	21,384,516	21,603,935	95,121,963	99,690,503
.....	1890 5,444,482	5,508,929	1891 124,589	125,503	235,197	232,984	2,413,827	2,330,214	543,881	495,176	12,847,142	10,383,452	22,975,195	20,385,911
WHEAT—FLOUR—Barrels.														
Month ending Dec. 31.....	1891 548,701	2,620,584	1890 120,304	588,255	174,554	872,770	352,723	1,841,448	12,862	55,826	171,135	843,979	1,526,961	7,620,737
Six months ending Dec. 31.....	1891 3,158,084	10,515,820	1890 782,113	3,907,291	653,357	3,231,644	1,465,368	7,700,115	35,736	179,759	844,978	4,090,530	6,614,664	33,390,439
.....	1890 1,604,706	7,569,264	1891 686,530	3,487,884	334,311	1,497,615	1,122,421	5,828,002	16,905	82,160	335,750	3,038,296	5,012,299	23,735,232
TOTAL BREADSTUFFS.														
Month ending Dec. 31.....	1891 12,998,027	.....	1890 1,264,728	.....	2,250,705	.....	4,712,702	.....	1,379,819	.....	6,086,775	.....	30,241,893	.....
Six months ending Dec. 31.....	1891 63,556,075	.....	1890 7,784,840	.....	11,346,921	.....	25,040,652	.....	9,807,373	.....	26,802,732	.....	155,989,193	.....
.....	1890 18,146,848	.....	1891 4,668,224	.....	18,278,871	.....	9,858,126	.....	1,355,451	.....	14,353,126	.....	54,806,213	.....
Twelve months ending Dec. 31.....	1891 84,231,149	.....	1890 13,058,401	.....	14,949,661	.....	34,422,636	.....	12,577,100	.....	47,738,687	.....	224,319,500	.....
.....	1890 44,515,326	.....	1891 9,901,651	.....	11,047,554	.....	26,224,214	.....	6,917,481	.....	28,416,147	.....	136,845,896	.....

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector P. Bird Price the grain received at Chicago during the month of November was graded as follows:

WINTER WHEAT.

Railroad.	White.				Hard.				Red.				No Grade.
	2	3	4	5	2	3	4	5	2	3	4	5	
C. B. & Q.....	3	1	65	46	20	60	.....	.....	.....	.....	.....	.....	.....
C. R. I. & P.....	2	113	130	7	10	94	3	.....	.....	.....	.....	.....	.....
C. & A.....	.....	.....	29	3	6	28	2	.....	.....	.....	.....	.....	.....
Illinois Central.....	.....	.....	3	8	5	3	.....	.....	.....	.....	.....	.....	.....
Galena Div. N. W.....	.....	.....	8	15	26	.....	.....	.....	.....	.....	.....	.....	.....
Wis. Div. N. W.....	2	.....	22	5	1	.....	.....	.....	.....	.....	.....	.....	.....
Wabash.....	.....	1	5	1	11	.....	.....	.....	.....	.....	.....	.....	.....
C. & E. I.....	1	.....	4	32	22	12	.....	.....	.....	.....	.....	.....	.....
C. M. & St. P.....	4	.....	4	3	22	12	.....	.....	.....	.....	.....	.....	.....
Wisconsin Central.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. St. P. & K. C.....	1	1	30	17	20	.....	.....	.....	.....	.....	.....	.....	.....
A. T. & S. Fe.....	10	8	328	8	90	63	.....	.....	.....	.....	.....	.....	.....
Through & Special.....	.....	8	110	8	30	37	2	.....	.....	.....	.....	.....	.....
Total each grade.....	13	11	32	712	127	233	353	10	.....	.....	.....	.....	.....
Total W. wheat.....	.....	.....	.....	.....	.....	.....	.....	1,481	.....	.....	.....	.....	.....

SPRING WHEAT.

Railroad.	2				3				4				No Grade.	White.	Mixed Wheat.
	2	3	4	5	2	3	4	5	2	3	4	5			
C. B. & Q.....	34	797	199	5	248	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. R. I. & P.....	18	38	50	2	5	78	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. & A.....	.....	.....	8	8	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois Central.....	.....	.....	8	8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galena Div. N. W.....	109	353	74	2	51	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wis. Div. N. W.....	81	67	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wabash.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. & E. I.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. M. & St. P.....	964	278	49	8	2	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wisconsin Central.....	.....	.....	7	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. St. P. & K. C.....	16	107	25	9	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. T. & S. Fe.....	177	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Through & Special.....	1,380	389	17	2	123	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total each grade.....	2,779	2,046	429	27	7	545	3	.....	.....	.....	.....	.....	.....	.....	.....
Total Spg. wheat.....	.....	.....	.....	.....	.....	.....	.....	5,896	.....	.....	.....	.....	.....	.....	.....

CORN.

Railroad.	Yellow.				White.				No Grade.
	2	3	4	5	2	3	4	5	
C. B. & Q.....	56	328	6	33	91	664	564	69	.....
C. R. I. & P.....	65	129	24	10	405	407	140	4	.....
C. & A.....	3	212	4	46	11	270	53	.....	.....
Illinois Cent.....	31	587	11	71	21	294	161	2	.....
Gal. Div. N. W.....	20	251	2	12	19	416	743	58	.....
Wis. Div. N. W.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Wabash.....	13	107	8	30	49	72	22	1	.....
C. & E. I.....	15	42	1	14	12	47	48	.....	.....
C. M. & St. P.....	2	126	2	6	25	354	308	5	.....
Wis. Central.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. St. P. & K. C.....	12	90	8	10	161	276	107	12	.....
A. T. & S. Fe.....	367	142	16	32	255	302	77	1	.....
Through & Spec.....	1	488	.....	25	118	466	158	4	.....
Total each grd.....	254	2,513	82	291	1,167	3,570	2,365	156	.....
Total corn.....	.....	.....	.....	.....	.....	.....	.....	10,398	.....

OATS.

Railroad.	White.		2	3	No Grade.
	2	3			
C., B. & Q.....	201	368	205	108	3
C., R. I. & P.....	55	332	36	87	.....
C. & A.....	29	32	27	8	1
Illinois Central.....	189	327	281	38	1
Galena Div. N. W.....	101	338	98	289	6
Wisconsin Div. N. W.....	26	72	7	22	3
Wabash.....	14	13	19	10	.....
C. & E. I.....	5	30	32	7	1
C., M. & St. P.....	247	679	79	131	5
Wisconsin Central.....	2	1	1	.....	.....
C., St. P. & K. C.....	57	185	83	64	.....
A., T. & S. Fe.....	32	59	32	23	.....
Through & Special.....	131	99	114	20	2
Total each grade.....	1,079	2,535	1,014	807	22
Total oats.....					5,457



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., JANUARY 15, 1892.

RELIEF FOR RUSSIA'S STARVING.

The Czar declares that there are no starving people in his empire, yet he has given large sums to help the suffering and denied himself a number of pleasures that he might be able to give more. The American people have more faith in the oft repeated reports of suffering and the Czar's actions than in the words of his Royal Highness, so have with earnest zeal set to work to send relief to the destitute districts.

The millers of the United States have already agreed to contribute 30,000 barrels of flour. In Iowa, Russian Relief Committees have been organized in every Congressional district, and sub-committees in every county. Corn and cash contributions are being received, and 100 cars of corn, with printed directions for preparing for food will be sent by the people of the state. All money received by the Iowa committees will be expended for corn in the district in which it is collected. Nebraska will send sixty cars with printed directions for preparing for food, and Kansas will send some.

The people of the famine-stricken provinces are strangers to wheat and corn flour, either of which is superior to their black bread, but since they have shown themselves able to sustain life on grass, roots and bark, it is not probable they will be long in utilizing the donation after it reaches them. The greatest difficulty is to get the food to the sufferers. In Russia most railways were built to transport armies, not commodities. Some districts of the Empire have a surplus, but much time is required to get it to the needy.

Money should not be sent because it will purchase much more of the necessities of life in this country than it will in Russia, and transportation is free. Money would also have less chance of getting to the sufferers than breadstuffs. Corrupt officials are said to be numerous in the Eastern provinces. If our grain dealers, growers,

millers and others charitably inclined, desire to make sure that their contributions reaches those in need, they should send an agent with the cargo.

DEMANDS OF MINNESOTA FARMERS.

The Minnesota Farmers' Alliance met recently and passed resolutions about nearly every old subject that farmers had ever discussed. To begin with, they heartily indorsed three platforms adopted at national meetings of farmers. After many resolutions regarding national affairs they condescended to resolve about things of their own state, and demanded "that the state shall erect at Duluth public warehouses where grain may be stored without mixing grain of different grades."

After the base charges were made by uninformed farmers against Duluth elevator men last spring, it is a wonder that any houses are operated as public elevators in that state. However, the proprietors were magnanimous enough to continue to operate public houses at the head of Lake Superior.

These broad minded, unselfish farmers also, "demand legislation, state and national, making it obligatory upon all railways to furnish side track facilities at all stations sufficient to accommodate all parties or partnerships desiring to rent and maintain elevators and warehouses of a capacity of not less than 5,000 bushels each."

KANSAS INSPECTION.

Last month a little flurry of excitement was caused by newspaper charges against the integrity of the inspection at Kansas City, Kan. It was broadly hinted that grain that inspected No. 3 on the Kansas side became No. 2 on the Missouri side, and that certain elevator owners profited by it. The charges flashed in the pan, as the shipper on whose authority they were made, promptly denied that he had made any allegations of crookedness. It appears that the inspection at Kansas City, Kan., is in the hands of practical men, while the state inspector, W. W. Haskell, not only has nothing to do with the inspection, practically, but seems altogether above the suspicion of being a party to a plan to fleece shippers and farmers.

But so long as inspectors are fallible and so long as different states and cities have different standards, there will be complaint and annoyance, and somebody must suffer, and somebody profit by the difference in grades. The test on No. 3 wheat is one pound less in Kansas than in Missouri, and the test on No. 3 hard is one pound more in Kansas. Even with identical grades, two sets of inspectors may grade grain differently, and both may endeavor to be perfectly fair. With the mistakes they make and the mistakes they do not make, and the blame for both, the lot of the inspector is not a happy one. But Kansas inspection and inspectors seem to a disinterested party quite as good as could be expected.

THE OHIO CANALS.

There is a perennial fight in Ohio on the subject of the state canals, and the legislature each year grudgingly appropriates a meager sum for their maintenance. The opponents of the canals regard the money as wasted, while the friends of the waterways are fully aware that the sums appropriated are inadequate. But the crisis seems to be reached at last, and the canals will either be abandoned or improved to a point where they will afford better and cheaper transportation.

Ohio has nearly 700 miles of canal (697 miles, to be exact), the original cost of whose construction was \$14,340,572. As part of the system are 29,690 acres of reservoirs for feeding the canals. The business done is indeed small, compared with the volume of traffic on railroads; so that the relative volume of traffic does not account for the eagerness of the roads to have the canals abandoned. Governor McKinley recommends in his inaugural not only appropriations for the canals

but the establishment of a commission to inquire into their necessities to promote better transportation. Clearly Ohio should not abandon her canals, which, however inadequate, may be made the nucleus of a system of water communication, valuable to her people. One plan of improvement involves the abandonment and sale of all the canal property except the Miami and Erie from Toledo to Cincinnati, and the Ohio between Cleveland and Dresden. The idea is to convert this into a ship canal from Lake Erie to the Ohio. This ambitious scheme involves the expenditure of nearly \$30,000,000, part of which would be defrayed by the sale of the canals to be abandoned.

INVESTIGATING MINNESOTA ELEVATORS AND MARKETS.

The investigating committee appointed at the last session of the Minnesota Legislature, in response to a petition from the Grain Growers Association to investigate charges of mismanagement against the Duluth elevators, met again recently, but the farmer agitators and aspiring demagogues as heretofore had no evidence to offer against the elevator men, and not one of their ambitious members dared to create another sensation by swearing to impossible robberies by the elevator men.

The outcome of the investigation at the last meeting of the committee was disastrous to the cause of the instigators. It was conclusively proven that the elevator men were guilty of sacrificing \$100,000 of their own cash to prevent heating wheat causing a panic in the markets. The wheat producers of the Northwest profited as much, if not more, by this action of the elevator men than any other class. The committee's plan to spend several weeks' time and \$1,000 of the state's money in preparing a report is a poor one; too much time and money have already been spent in a vain effort to advance the cause of the agitators.

The proposition of the Wheat Growers' Association that the committee investigate the alleged wheat combine at Minneapolis merits no attention from the committee, in fact it was not appointed for that purpose, and has no power to do so. The weird tales about the \$6,000-a-year man who fixes the price of wheat, and the Minneapolis market not being a free market, are indeed pleasing. The voter who is such a credulous gull as to swallow that story deserves to be disfranchised. Any man who can think knows better, and arguments are not required to convince him of the falsity of the statement.

OUR CORN ABROAD.

The United States could well afford to spend millions of dollars to introduce our corn to the people of Western Europe. If an export demand of any considerable proportions existed, we mean in comparison with the size of the crop, a permanent increase in the price of corn could be looked for, which, if amounting to five cents a bushel would be worth a hundred million dollars a year to our farmers. It is true that corn is already largely used for food in Italy and Southeastern Europe; but Western Europe is not likely to adopt its diet from that quarter. In Western Europe, Ireland is the only country where Indian corn is at all used for human food. And this is a legacy of the famine year when corn was sent to the starving. It is true that many preferred starvation to the corn; but some of the corn fell on good ground, and Ireland eats corn to-day.

An example of the prejudice against corn was lately seen in Glasgow, when a member of the Poorhouse Board who proposed to substitute maize for costlier food, was denounced for his inhumanity! But the light is breaking, due to the missionary efforts that are being made. A great store has been opened in Berlin for the sale of bread made from a mixture of rye and corn. The price is 40 per cent. less than rye bread. It is believed that bakers all over Germany will soon be experimenting with cornmeal. It is proposed to send cornmeal to Russia to aid the

starving masses, though there would seem little hope of building up a permanent trade with that country. What we need in England, Germany, and France is a bake-shop propaganda. That will do the work effectually and create a demand for our corn that will be money for us and a god-send to the underfed masses of Europe.

GULF PORTS AND THE GRAIN TRADE.

The impression is gaining ground very fast with those interested in the commercial advancement of the Gulf cities that the time is not far distant when much more grain will be handled at Gulf ports and indeed there are many good reasons for thinking it will be so.

As the crops of our Southwestern states increase new and nearby outlets are sought for the surplus. Of this, the markets of the West Indies, South and Central America which are taking more and more of our products each year will absorb a good portion. The action of the managers of the Rock Island Railroad in deciding to extend their line to Texas cities which have direct connections with Gulf ports, shows that they are confident much of the surplus grain of Kansas and some of Nebraska will in the near future be exported via Gulf ports. The increase in manufacturing industries in the Southern states is increasing the demand for grain. The immense cotton crops with small returns are influencing the farmers in the direction of diversity of crops, more space, care and time to the cultivation of grain. With foreign markets so near at hand it would seem that Southern farmers could by careful farming secure better returns from grain than from an overproduction of cotton, the most of which goes to England.

Capitalists have faith in the growth of the grain trade of the Gulf ports, and are showing it by erecting large grain elevators at different ports. A million-bushel elevator is being erected at Galveston which already has a large elevator. Elevators are also being erected at Velasco, Tex. At New Orleans a contract has just been let for an elevator that will have a receiving and loading capacity of 15,000 bushels per hour, and the erection of another large house is being considered. As is shown by a communication published in this issue Mobile citizens are desirous of having a large elevator erected at that port.

SELLING GRAIN BY SAMPLE.

The practice of selling grain by sample seems to be gaining favor with country shippers, millers and retailers. Not because they desire to save the expense of inspection at distributing markets, but because they do not wish the grain to pass through the public warehouses at those markets, for in so doing its quantity is always and its value frequently reduced. During the twelve months ending with last October only fifty-one per cent. of the grain received at Chicago was placed in store. As all grain shipped East by lake is placed in store it is reasonable to estimate the amount of grain placed in store at owner's desire was not over 25 per cent. of the receipts.

Whenever grain is placed in store it is docked for future shrinkage and loses its identity. To prevent this, and to avoid paying storage charges, the owner sells by sample. If grain sold by sample is sent through a central market and is transferred from the cars of one road to those of another by a storage elevator, the grain loses its identity and is frequently found to be much below the sample in quality.

The law which permits a public warehouseman to own grain stored in his own house is decidedly wrong, for under such a state of affairs he will surely place the best of each grade in a special bin to keep for canceling his own certificates. The shipper gets skin grade grain. When grain is transferred from one road to another by a regular transfer house which has no storage bins, the identity of the grain is retained, and the shipper is not startled by a report of a remarkable shrinkage in weight, which he must

accept, regardless of the fact that he knows his own weights are correct.

Railroad companies should have at points where grain is transshipped one or more transfer houses. This would enable country shippers to sell more grain by sample, and insure the delivery of the grain sold. Shipments would surely be attracted to lines having these facilities when shippers learned of it. Storage charges with unjust dockages of 3 to 15 bushels per car are two things the country shippers have long desired to avoid, and selling by sample is one way they have of avoiding them.

CANNOT FORCE PAYMENT OF DEMURRAGE.

The railroad companies of the country have repeatedly compelled shippers and receivers to pay demurrage charges by refusing to deliver any more freight or cars to them until back charges were paid. The Illinois Railroad and Warehouse Commission has decided that carriers could not take this means of collecting demurrage charges, but must bring suit at law. Nevertheless, the carriers continue to force payment in this way.

The Chicago Car Service Association recently tried to compel a receiver to pay demurrage charges in this way, but he rebelled and took the case into the courts, with the result that the carrier was enjoined from attempting to collect disputed charges for demurrage and track service through or by refusing to perform its duties as a common carrier. In concluding the judge said: "As a matter of law the defendant is not authorized to refuse to perform its duty as a common carrier by reason of the non-payment by said complainant of said charges for car service or demurrage, and for track service accruing from different and separate transactions for the shipments in controversy, and that it has no lien upon the goods so embraced in said shipment for said charges, and cannot legally refuse and withhold from said complainants the delivery of said cars."

The grain blockade which started at Buffalo some time ago, and extended to all parts of the country, is over, but the memory of the trouble it caused is with us still, and will remain. The railroads loading out of Buffalo had more than they could handle, while the Erie Canal boats had little to do. If canal boatmen could have secured grain cargoes, they would have found it extremely difficult to get the elevators to load, as many lake vessels were detained for weeks before they could get a chance to unload. The delay of lake vessels will probably result in much litigation.

THE COUNSELMAN DECISION.

The Inter-State Commerce Law has received a blow that is almost fatal to its operation in the late decision of the United States Supreme Court. Charles Counselman is one of the largest grain dealers of the country. It was commonly believed that he was receiving rebates from the railroads that enabled him to ship grain to the seaboard from 1½ to 2½ cents cheaper than competitors. Cited before a federal grand jury, he refused to answer questions or produce his books on the ground that if guilty under the Inter-State Commerce Law, he was committing a criminal offense, and under the constitution could not be compelled to incriminate himself. Judge Gresham committed him for contempt. The matter was appealed to the United States Supreme Court, which now decides that Counselman's position was correct, and that neither he nor any other shipper can be compelled to testify against himself.

The decision is of course good law, but it renders the Inter-State Commerce Law inoperative in one of its most important features, unless it can be amended to meet the difficulty. Violations of the law, as it now stands, are a good deal like cases of bribery; neither party can be compelled to testify, and both parties to the

violation are interested in not testifying. The only relief for this is to absolutely free one side or the other from penalty and prosecution. If the shipper is relieved of prosecution, he could be compelled to testify and produce his books. Something must be done if the rebate business is to be stopped.

WAREHOUSEMEN ORGANIZE.

For some time responsible warehousemen of the country have been making an effort to organize an association, and at last they have succeeded in forming a strong association. It will be known as the American Warehousemen's Association, and will admit to membership only persons whose reputation and financial standing are such that their being connected with the association will be a guarantee of their reliability, which it must be admitted will go far toward increasing confidence in warehouse receipts, and make them acceptable as collateral in many places where they are not received now.

An effort will be made by the association to secure legislation in each state which shall define the liability of warehousemen for property intrusted to their care, and which shall secure them better legal protection against seizure of goods upon which warehouse receipts are outstanding, and which shall authorize warehousemen to sell perishable property at once, and non-perishable property for unpaid charges after a reasonable length of time.

The directors of the Chicago Board of Trade have adopted a resolution in which they express themselves as being in hearty accord with the purposes and objects of the association, and promise to render it all proper encouragement.

All public warehousemen will without doubt be materially benefited by the organized efforts of this association for the advancement of their common interests.

A BANNER YEAR FOR GRAIN.

The last report of the Government Agricultural Department issued early this month gives another severe blow to green-goggled pessimists and statistical tyros who persist in predicting that we will import food products in 1895 or starve. The report is published in the department of "Crop Conditions." The values of the wheat, corn and oats crops are greater than for any previous year.

The wheat crop is estimated at 611,730,000 bushels, nearly 100,000,000 bushels in excess of the 1884 crop, which was the largest on record until the 1891 crop was harvested. The estimated value of the crop also exceeds all previous years. The average yield per acre, 15½ bushels, is also greater than for any preceding year of which we have record. In 1877 the average yield was 13.8, which had been equaled only once since that year, and not excelled until 1891. The acreage of 1891 was also the largest on record, 1884 coming next to it with 39,475,885 acres.

The yield of corn has been exceeded but once, in 1889, when the acreage was more than 2,115,000 acres greater and the quantity was 52,738,000 bushels more. The value, however, is the highest ever credited to the corn crop.

The oats crop leads that of other years in value, but the crop of 1889 exceeds it in quantity by 13,121,000 bushels.

Last year is surely a banner year as regards quantity, value and yield per acre, and if 1892 is anything like it our farmers will be bloated capitalists and our grain dealers very busy mortals.

The National Board of Trade will meet at Washington on January 27, and (as usual) will make a large number of important recommendations to Congress, in regard to credits, silver, commercial transactions, waterways, interstate commerce, etc., which recommendations Congress will proceed (as usual) to completely ignore. The uniformity with which the National Board of Trade's recommendations are overlooked would discourage a less sanguine and more compact organization.

Grain Dealers' Associations.

KANSAS AND NEBRASKA GRAIN DEALERS' ELEVATOR ASSOCIATION.

President, MASON GREGG, Lincoln, Neb.; *Vice-President*, FRANK LOWER, Council Grove, Kan.; *Secretary*, W. T. CAYWOOD, Clifton, Kan.; *Treasurer*, O. A. COOPER, Humboldt, Neb.

STATE GRAIN DEALERS' ASSOCIATION OF TEXAS.

President, S. F. McENNIS, Dallas; *Vice-President*, E. EARLY, Waco; *Treasurer*, J. P. HARRISON, Sherman; *Secretary*, G. D. HARRISON, McKinney. *Directors*, J. F. McENNIS, J. P. HARRISON, E. EARLY, S. E. McASHAN of Houston and C. F. GRIBBLE of Sherman.

GRAIN SHIPPERS' ASSOCIATION OF NORTH-WEST IOWA.

President, T. M. C. LOGAN, River Sioux; *Vice-President*, H. HANSON, Odebolt; *Secretary and Treasurer*, F. D. BABCOCK, Ida Grove; *Assistant Secretary*, F. G. BUTLER, Schaller.

Executive Committee, E. A. ABBOTT, Des Moines; J. Y. CAMPFIELD, Sac City, and T. M. CATHCART, Kingsley.

GRAIN DEALERS' AND MILLERS' ASSOCIATION OF THE CUMBERLAND VALLEY.

President, S. C. WAGNER, Newville, Pa.; *Secretary*, JOHN A. MILLER, Oakville, Pa.; *Treasurer*, D. H. MILLER, Oakville, Pa. *Executive Committee*, J. K. BEIDLER, Oakville, J. W. SHARPE, Newville, U. G. BARNITZ, Barnitz; H. K. MILLER, Huntsdale, and J. H. BRINKERHOFF of Walnut Bottom, Pa.

ILLINOIS GRAIN MERCHANTS' INSURANCE AND PROTECTIVE SOCIETY.

President, H. C. MOWREY, Forsythe; *Secretary and General Manager*, S. K. MARSTON, Onarga; *Vice-President*, EDWIN BEGGS, Ashland; *Treasurer*, E. R. ULRICH, Jr., Springfield.

Executive Committee, E. F. NORTON, Tallula; F. M. PRATT, Decatur; T. P. BAXTER, Taylorville.

Committee on Claims, W. B. NEWBIGIN, Blue Mound.

GRAIN DEALERS' ASSOCIATION OF OHIO.

President, E. C. WAGNER, Columbus, Ohio; *Vice-President*, E. M. BENNETT, Jr., Urbana; *Secretary*, E. W. SEEDS, Columbus; *Treasurer*, J. W. McCORD, Columbus.

Board of Managers, J. C. HANNUM, Duvalls; J. W. JONES, Radnor; J. P. McALLISTER, Columbus; J. W. WOLCOTT, Conover, and N. R. PARK, Ada.

Legislative Committee, J. W. McCORD, D. McALLISTER, E. W. SEEDS, E. C. WAGNER, W. A. HARDESTY, and E. C. BEACH.

EDITORIAL MENTION

We will be pleased to publish communications on any subject of interest to those connected with the grain trade.

We are indebted to S. Howes of Silver Creek, N. Y., for a wall calendar bearing illustrations of the Eureka Works, the proprietor, and the products.

A BEAUTIFUL calendar has been issued by the Charter Gas Engine Company of Sterling, Ill., manufacturer of the Charter Gas Engine, "The Motor of the 19th Century."

A NEW YORK Congressman has introduced a bill providing for the reduction of grain import duties as follows: On barley to 10 cents a bushel of 48 pounds; on barley malt, 20 cents a bushel of 34 pounds; on hops, 8 cents a pound.

We have received a very interesting little pamphlet from the Detroit Dry Dock Company of Detroit, Mich., entitled "The Twenty-foot Channel." It contains much valuable information regarding the shipping trade of the great lakes,

the advantages now secured by lake transportation, and what they will be when the channel is the desired depth. The lake rate per ton-mile is given as 1.2 mills, while the rail rate per ton-mile is 9.41 mills.

T. C. FRIEDLANDER, secretary of the San Francisco Produce Exchange, has our thanks for a copy of the twenty-fourth annual report of the exchange. It contains much valuable statistical matter regarding the grain trade of the Pacific coast.

Do you use matches? If so, you should have a match safe. By sending six cents postage to the Gutta Percha and Rubber Manufacturing Company, whose advertisement appears in this issue, and mentioning this paper, you can get one free of charge.

CUTLER & Co. of North Wilbraham, Mass., have changed the style of the firm name, and henceforth will be known as The Cutler Company. The company will continue to supply the trade with the Automatic Adjustment Mill, Steam Grain Dryers, and Combination Bagging Scale.

ELSEWHERE is given a full account of the Russian subtreasury scheme as applied to grain, from the report of our consul-general at St. Petersburg, Mr. Crawford. While Mr. Crawford states that the plan is a success with the Russian peasants, he is no less emphatic in his belief that the system would not be attractive to American farmers. In fact, a perusal of the plan will show that it is hardly consonant with the genius of American institutions.

THE report of the chief inspector at Omaha for the month of December shows that during that month 1,759 cars of grain were inspected at that point, divided as follows: Wheat 213, corn 1,296, oats 183, rye 59, barley 7. The inspection charges are 35 cents per car. The amount of grain inspected at Omaha during the months of September, October and November was 734, 1608 and 1813 cars, respectively. The inspection department is now self-sustaining.

AN ENTERTAINING little book entitled "What Visitors Will be Shown at the World's Fair by Merchant & Co.'s Brownies" has been issued by Merchant & Co. of Philadelphia, New York, Chicago, Kansas City, and London, manufacturers of roofing plates, tin, copper, and galvanized iron specialties. The catalogue contains a number of well-designed illustrations showing the Brownies in the act of displaying in their own expressive way the products of Merchant & Co. to an interested crowd of foreigners.

SENATOR WASHBURN now says that he sees several defects in his bill and that he introduced it more to excite discussion than anything else. It might be objected that it is hardly good statesmanship to threaten legislation as a means of exciting discussion; but it is to be hoped the Senator is satisfied with the amount of discussion it is evoking, even if not complimented by its tenor. When it is considered that the Senator has been buying grain a large portion of his life his bill exhibits an ignorance of the grain business that is truly colossal.

At the recent Waterways Convention held in Detroit, the representatives of every city save Buffalo were in favor of building a ship canal around Niagara Falls. If the Eastern terminal of lake navigation was taken to Lake Ontario, it would deliver the export grain trade of the country from the clutches of the railroad and elevator combination at Buffalo. To build a ship canal around Niagara Falls on the American side would be difficult and very expensive. The more practical and less expensive plan would be to make arrangements with the Dominion Government whereby the Welland Canal, which is now fourteen feet deep, could be made to accommodate vessels drawing twenty feet of water, and

have it free to vessels of both countries. It is the shortest route between the two lakes and better located for accommodating lake traffic than a canal on the American side would be.

THE organized move of the representatives of the lake cities for a twenty-foot channel to connect the great lakes of the boundary line is tardy, but deserves the hearty support of all, and especially of those dwelling in the large territory tributary thereto. The connecting channels should have been made not twenty but twenty-two feet deep years ago. Let the railroads competing with the lake marine be held in check at least during the season of navigation. When navigation closes they will be expected to advance rates as they do at present.

THE article by "Observer," entitled "Grain Stealing, and the Reason Why," merits careful reading by every one connected with the grain trade. The writer has been connected with terminal elevators for a number of years, and is thoroughly competent to deal with the shortage question. Every house, country as well as terminal elevators, should have a reliable automatic weight recorder. As "Observer" conclusively shows, so it is that entirely too much confidence is placed in the ability of the weighman to record weights correctly.

THE Illinois Warehouse Commissioners have established two grades of clipped oats and may establish another grade. Clipping oats has become an industry of no small importance, and to facilitate the trade in clipped oats these grades have been established. Heretofore shippers have of necessity sold clipped oats by sample, and this placed them at the mercy of the Eastern buyer, who if dissatisfied for just cause or selfish purpose could claim oats were not up to sample and refuse to accept them at contract price. Now shippers can sell by grade, and if dissatisfied with grading the buyer must petition the Committee of Appeals.

THE Inter-State Commerce Commission has again recommended that the law be amended, so that corporations as well as their employes and agents shall be indictable. It also asks that some time be fixed within which carriers shall be required to adopt uniform classification of freight. The Commission seems to have forgotten about the uniform bill of lading with the reciprocal demurrage charge. A clean bill of lading which provides that carriers shall pay shipper as much per day for delaying his goods in transit as shipper is charged for delaying cars is greatly desired by and in justice is due, to the grain shippers of the country.

A CORN exhibit will probably be one of the attractive features of the World's Columbian Exposition. A bill has been introduced in Congress by Representative Scott appropriating \$100,000 to make a special display of our corn product. In the bill it is stated that, "It is believed that the magnitude of the corn product is such as to require a special exhibit; that the agricultural capacities of our country may be more fully shown, and the consumption of corn products brought to the notice of other nations." If we can induce Europe's millions to eat corn bread instead of black bread, we will have a large market that cannot be taken from us.

THE general revival of interest in waterways has again drawn the attention of Eastern papers to the subject of a ship canal from the lakes to the seaboard. The receipts of grain at Buffalo during 1891, were 127,856,153 bushels and of flour, 7,260,092 barrels. Of this amount the Erie Canal carried 33,574,945 bushels of grain and 9,992 barrels of flour. The rates from Buffalo to New York, during the season averaged 43¢ cents by the railroads, so long as navigation was open, and went up to 7½ cents as soon as the canal was closed. A through freight rate from Duluth and Chicago to New York, over a ship canal, with no reloading and elevator

charges at Buffalo, would certainly save a lot of money and trouble each year. But a ship canal would cost a mint of money.

WHEN writing us give the condition of crops in your district, stocks in store and farmers' hands. Contributions to our new department, "Crop Conditions" will be welcome.

A CHICAGO jury has decided against the Stock Quotation Telegraph Company in its efforts to secure \$20,000 from the Chicago Board of Trade for discontinuing to supply market quotations. The Board's attempt to shut off the bucket shops has been very expensive and futile, yet it continues the fight.

THE market price of corn has declined, so have shipments, and as the blockade is over it is now claimed that rates to a few favored shippers have also declined. The Baltimore & Ohio is charged with giving a rebate of three cents a hundred on corn to Baltimore, but no open cutting of rates has been indulged in as yet.

CORN receivers of Minneapolis have secured the approval of the board of directors of the Chamber of Commerce for a reduction of the commission on corn from 1 cent to one-half cent per bushel. The members will vote on the change soon and as no opposition has yet been made it seems sure of being accepted. The reduction cannot help but have influence with shippers.

THE special committee of the Minneapolis Grain Receivers appointed to investigate charges of irregularities on the part of commission men found that several firms had made a cut in commissions. The firms had bought wheat on track at country points and sold it immediately on the Minneapolis market. The firms doing it agreed to stop, so the matter was dropped.

REPORTS of suffering for want of food in Mexico are not numerous, but are undenied. The Mexicans that are in need of food depend principally upon corn for food, and of this grain we can spare enough to feed the entire republic, and not miss it. Will we supply them with necessities at market prices, or extend a helping hand as we are now preparing to assist Russia's starving?

THE Russian Government, it is reported, has decided to permit the exportation of all cereals save rye after April 1, and will allow millers to export henceforth flour made from imported wheat. The Russian officials must see the error of the prohibitive policy for the destitute districts will not recover from the effects of the crop failure until long after the date named for removal of the prohibition.

It is not often that lawyers try their hands at the grain elevator business, but they did so at Buffalo several years ago, and are undoubtedly sorry for it now. They erected the International Elevator at a cost of about \$150,000, and recently it was sold by the sheriff for \$73,000. The buyer was offered \$30,000 for his bargain the day after the sale, but he refused, which made the lawyers sadder still. Many farmers' organizations have tried the same thing, and practical elevator men have secured the houses at a figure much below cost.

At last the National Transportation Association has demanded reciprocity in car service matters. The association now maintains that it is all right that shippers and receivers should pay extra charges for delaying cars an unreasonable time, but that it is also nothing more than simple justice that the carriers should pay for delaying goods an unreasonable time. The association has also asked the Inter-State Commerce Commission to use its influence in securing a uniform bill of lading and a plain, common law compelling a uniformity in charges, with time and distance

as the essence of the contract. Congress has also been asked to amend the law to conform with these ideas. Shippers at every meeting should in justice to themselves petition Congress to make these changes in the law.

If our scientists keep on discovering ways and means of overcoming the difficulties of securing a sure crop of grain every season, we may be able to grow enough grain to supply the home demand after all—pessimists and alleged crop statisticians to the contrary. We have a cure for smut, two contagious diseases for chinch bugs, a destructive parasite for the Hessian flies, a weevil exterminator, smudges for frosty nights, irrigation and artificial rain for dry land, and the last and latest is a destructive disease of the white grub, germs of which have recently been imported from France by Prof. S. A. Forbes, State Entomologist for Illinois. Prof. Forbes is now growing the spores of the fungus in gelatine, and by spring will have a large supply with which to commence a crusade against the white grub.

THE boatmen and friends of state canals will hold a meeting to-night in New York City to take steps to secure the establishment of state grain elevators in Buffalo and New York harbors to prevent old-time extortion from the grain trade. The immediate improvement of the New York State Canals will be demanded. Erie Canal boatmen claim that the Buffalo railroad grain elevator pool caused the grain blockade at that port and that the pool shamefully discriminated against individual vessel and propeller owners and would not load canal boats except when no cars were to be had. When this pool has destroyed the Erie Canal the grain shippers of the country may realize that they have lost an opportunity to join hands with the Erie boatmen, and maintain a summer depressor of rates on grain-from Buffalo to the sea. Elevators with special facilities for handling shipments by canal boats and independent of the pool should be provided at both ports.

PRODUCTION OF WHEAT BY STATES.

The January report of the Department of Agriculture shows the area, product and value of the 1891 wheat crop to be as follows:

States.	Acres.	Bushels.	Value.
Maine.....	41,017	669,000	\$ 735,435
New Hampshire.....	8,972	148,000	170,244
Vermont.....	19,673	344,000	392,477
Massachusetts.....	1,833	31,000	32,808
Rhode Island.....	640,540	10,633,000	10,632,964
Connecticut.....	138,833	2,124,000	2,209,111
New York.....	1,337,437	20,864,000	20,861,017
Pennsylvania.....	97,634	1,250,000	1,249,715
Delaware.....	540,494	8,107,000	8,107,410
Maryland.....	850,073	7,651,000	7,650,657
Virginia.....	731,573	4,975,000	5,074,190
North Carolina.....	180,395	992,000	1,091,390
South Carolina.....	309,743	2,323,000	2,555,380
Georgia.....	281,327	2,251,000	2,475,678
Florida.....	61,965	493,000	483,327
Alabama.....	536,247	6,435,000	5,598,419
Mississippi.....	232,940	2,236,000	2,012,602
Louisiana.....	1,198,553	11,626,000	10,812,147
Texas.....	332,295	3,423,000	3,285,793
Arkansas.....	1,037,870	13,181,000	11,862,854
Kentucky.....	2,662,603	45,531,000	41,888,070
Ohio.....	1,606,670	30,205,000	47,486,910
Michigan.....	2,917,518	52,807,000	45,414,085
Indiana.....	1,945,332	55,025,000	29,771,230
Illinois.....	960,128	13,043,000	10,955,892
Wisconsin.....	3,113,917	53,333,000	43,259,692
Minnesota.....	1,803,036	27,586,000	22,345,025
Iowa.....	1,892,082	25,732,000	20,585,852
Missouri.....	8,539,750	54,866,000	40,052,384
Kansas.....	1,205,350	18,080,000	13,198,583
Nebraska.....	2,815,007	36,595,000	34,765,336
California.....	692,055	13,149,000	11,571,160
Oregon.....	20,338	372,000	323,801
Nevada.....	100,832	2,037,000	1,486,868
Colorado.....	27,227	395,000	296,094
Arizona.....	2,927,274	52,105,000	36,473,834
North Dakota.....	1,954,833	29,714,000	21,394,240
South Dakota.....	90,531	1,811,000	1,520,921
Idaho.....	92,803	1,850,000	1,559,090
Montana.....	93,328	1,073,000	880,083
New Mexico.....	186,764	2,393,000	1,795,028
Utah.....	698,040	12,216,000	9,161,775
Washington.....	5,500	110,000	90,200
Wyoming.....	39,916,897	611,780,000	\$513,472,711

DECISION IN GRAIN SHORTAGE CASE BY AN ENGLISH COURT.

A case of more than usual importance to the grain trade was tried before Mr. Justice Grantham at Leeds recently. We refer to the case of The Steamship Albany Company vs. Proctor, which possessed considerable interest both for shipowners and importers of grain, substantially turned upon what is the meaning of "dispatch terms" in connection with the discharge of cargoes of grain. Ralli Bros. of London had shipped at Kurrachee 34,650 bags of wheat on board the steamship Albany. The bills of lading contained a clause to the effect that the ship's responsibility was to cease when the cargo had left the ship's tackles at the port of discharge, which in this case was Hull. The defendants, Proctor & Sons of Liverpool and Hull, were the assignees of the bills of lading. On arrival at Hull the steamer was discharged on "dispatch terms." This meant that the cargo, instead of being delivered direct from the ship to the consignees in which case it would be weighed and tallied on the ship's deck during the discharge, was delivered to a quay and then stored in a warehouse of the dock company. The cargo was then delivered from the warehouse to the consignees, the delivery not being completed until a fortnight had elapsed since the steamer had been discharged. The ship was unloaded in a very hurried manner, the discharge being carried on by night and day continuously, as the ship was urgently required elsewhere. It was admitted that the extra expense incurred in the delivery to the consignees was to be borne by the shipowners.

When the delivery from the warehouse to the consignees was completed, it was found there was a shortage of 120 bags from the bills of lading quantity. The value of these was £69 11s. 2d, after deducting the freight that would be due upon them, and this sum was deducted by the consignees from the freight claimed, and the question was as to whether or not the consignees were entitled to make this deduction. It was alleged on behalf of the shipowners that their responsibility ceased when the cargo had left the ship's tackles, and there was nothing to show that the whole cargo had not been placed on the quay. For the consignees it was contended that the ship's risk continued until the delivery from the warehouse to the consignees had been completed, as the discharge of the ship on "dispatch terms" was entirely in the interest of the shipowners. It was further contended on behalf of the consignees that if they allowed an unreasonable time to elapse before they took delivery from the warehouse, it was competent for the shipowners to give orders to the dock company to weigh over the balance of the cargo to them. It was probable that the missing wheat had been stolen between the ship's arrival and the final delivery.

The learned judge upheld the contention of the defendants, and held that under the circumstances the risk of the shipowners continued until the final delivery of the wheat to the consignees had been completed. He therefore held that the defendants were entitled to deduct the £69 11s. 2d. from the amount claimed for freight, and accordingly gave judgment for them for this amount on their counterclaim, with costs.

Send us news of interest to our readers.

Receipts of corn at Philadelphia January 5 were 285 cars, inspected; all but four of which were of grades suitable for export.

During November Kansas City and adjacent Missouri River territory shipped 5,671 cars wheat, and 5,680 cars corn, oats and barley; against 1,839 cars wheat, and 654 cars corn, oats and barley in November, 1890.

Our exports of wheat, and of flour in its wheat equivalent during the last half of 1891 aggregated 121,899,194 bushels, against 110,837,978 bushels, and 115,125,272 bushels for the corresponding periods of 1880 and 1870 respectively.

The president has appointed Inter-State Commerce Commissioners as follows: James W. McDill of Iowa vice Thomas M. Cooley, resigned; William W. Lindsay of Kentucky vice W. L. Bragg, deceased, and William R. Morrisson, reappointed.

The stock of flaxseed in Chicago regular elevators was, on January 2, 3,277,831 bushels No. 1, 129,283 bushels Rejected, and 9,694 bushels No Grade; against 1,950,401 bushels No. 1, 26,300 bushels Rejected, and 1,122 bushels No Grade on January 3 last year.

ELEVATOR

GRAIN NEWS

Send us the news of your district.

Norcross, Minn., wants an elevator.

An elevator is to be built at Buda, Neb.

A hay press is wanted at Roscoe, Minn.

Murdock, Minn., wants a grain elevator.

Grain elevators are being built at Velasco, Tex.

Gowan & Sons will build a brewery at Victoria, B. C.

J. F. Ashworth, grain dealer at Cylinder, Ia., has sold out.

McPhair's starch factory at Washburn, Me., has been started.

Cogar, Haas & Co. intend to build an elevator at Danville, Ky.

A 30,000 bushel elevator has been built at Michigan City, N. D.

The Prairie Elevator Company will build an elevator at Cozad, Neb.

C. S. Parker, grain dealer at Thomasville, Ga., has sold his business.

Daniel Embree, dealer in grain and lumber at Grand Junction, Ia., has sold out.

J. M. Sewell & Co., grain dealers at Minden, Neb., have dissolved partnership.

Clark & Linton, grain dealers at Minneapolis, Minn., have dissolved partnership.

Items of interest to the grain trade will be published in our columns free of charge.

A. J. Hughes of Souris, Man., is building a 30,000-bushel elevator at Mentieth.

The elevators and corn cribs in Nebraska are reported to be completely full of grain.

Charles Chambers has bought a 25,000 bushel grain warehouse at Greencastle, Pa.

A starch factory will be built by R. R. Ketchum at Hodgdon, Aroostock Co., Me.

Faga, Shaver & Co., grain dealers at Adair, Ia., have been succeeded by George Faga.

C. Woodworth & Co., dealers in grain at Rochester, Minn., have dissolved partnership.

Nye, Jenks & Co., grain dealers at Minneapolis, Minn., have filed articles of incorporation.

The Madison Distilling Company of St. Louis will build distilleries to combat the whisky trust.

The Gonzales Gin and Oil Company will build a cottonseed oil mill and gin at Gonzales, Tex.

Maguire & Rogers, grain commission dealers of New York City, have dissolved partnership.

A wheat buyer has been stationed at Niverville, Man., by the Ogilvie Milling Company.

New Orleans has sixteen rice mills, working 220 rice pounders, employing more than 1,200 men.

The Lake of the Woods Milling Company is building a large elevator at Portage la Prairie, Man.

Wheelwright & Archer, dealers in grain and feed at Richmond, Va., have dissolved partnership.

Douglas, Neb., has 30,000 bushels of corn in elevators and cribs waiting for cars in which to ship.

Albert F. Bullen has bought a site in Chicago for the erection of a large malt house next summer.

The Armour Elevator Company has taken out licenses to operate six public warehouses in Chicago.

J. B. Christian & Co., grain dealers at Omaha, Neb., have taken Samuel Cottner into partnership.

Large quantities of wheat have been exported from Minneapolis, Minn., via Newport News, Va.

J. Metzger & Co., dealers in grain and hay at Meriden, Kan., have been succeeded by E. A. Wagner.

The F. W. Cook Brewing Company of Evansville, Ind., will rebuild its recently burned brewery.

The Farmers' Commission Company of Kansas City, Mo., has been succeeded by Peake & Dunning.

The Alliance Elevator Company has been incorporated at Broken Bow, Neb., with \$10,000 capital stock.

The Minnesota Elevator Company has been incorporated at Chicago, Ill., with \$25,000 capital stock.

Seven Barnard & Leas Warehouse Separators have been placed in the Minnesota Elevator at Chicago.

Grain buyers are commencing business along the line of the Northwest Central Railway in Manitoba as fast as

the track is laid; fifty miles of the road is now in operation.

S. P. Cook has taken charge of the Consolidated Milling Company's new elevator at Minneapolis, Minn.

Salisbury & Holstein, grain dealers operating an elevator at Milwaukee, Wis., have dissolved partnership.

A. S. England & Co., dealers in grain, flour and provisions at Greenville, Miss., have dissolved partnership.

J. R. Tomlinson, dealer in grain and feed at Philadelphia, Pa., has been succeeded by J. R. Tomlinson & Co.

The Sioux City Provision & Grain Company of Sioux City, Ia., has been succeeded by J. S. Morris, Jr. & Co.

Fuller, Smith & Fuller, dealers in grain, lumber, coal and live stock at Scribner, Neb., have dissolved partnership.

Norman L. McElliot has retired from partnership in the firm McElliot & Coster, grain dealers of New York City.

The Columbian Brewing and Malting Company has been incorporated at Chicago, Ill., with \$25,000 capital stock.

The Illinois Brewers' Grain Drying Company has been incorporated at Chicago, Ill., with \$100,000 capital stock.

The Home Brewing Company has been incorporated at St. Louis, Mo., to build a brewery, with \$250,000 capital.

Martin Wagar & Co., grain commission dealers at New York City, have taken John B. Drayton into partnership.

Beach & Lang, operating grain elevators at Litchfield, Ill., have been succeeded by the Beach & Lang Milling Company.

F. M. & H. Brooke, grain commission dealers of Philadelphia, Pa., have admitted E. Eldridge Pennock into partnership.

Hicks Bros. of Council Hill, Ill., have rented James Allen's warehouse at Scales Mound, and will buy grain at that place.

Albert S. Boyd has retired from partnership in the firm of Wm. L. Boyd & Co., grain and flour dealers at Baltimore, Md.

An elevator is being built at Buffalo, N. Y., for Kellogg & McDougall. It will have a storage capacity for 500,000 bushels.

Walker & Co., dealers in grain and stock at Chicago, Ill., have been succeeded under the same firm name by Edwin C. Walker.

Hedges & Junk, dealers in grain, coal, lumber and farm machinery at Shelton, Neb., have sold their coal and lumber business.

The starch works at Indianapolis, Ind., are converting 2,500 bushels of corn daily into starch, about 90 per cent. of which is for export.

G. Overend of Cincinnati, O., has purchased and will enlarge the plant of the Chattanooga Elevator Company at Chattanooga, Tenn.

Up to Christmas 220,000 bushels of wheat had been shipped from Inkster, N. D., with about as much more remaining to be shipped.

A. Werner of Walcott, Ia., has bought a complete elevator outfit of the Barnard & Leas Manufacturing Company of Moline, Ill.

Corn cribs in Knox county, Neb., are staggering under their heavy loads. At Creighton many thousand bushels are piled up on the ground.

Remington, the murderer of J. B. Flett, elevator agent at Fargo, N. D., was recently condemned to pass the remainder of his life in prison.

John Butler, manager of the Midland Elevator Company at Midland, Ia., embezzled \$4,000 from his employees, and was arrested in Chicago.

Barnett & Record of Minneapolis, Minn., have nearly completed the new 600,000 bushel house of the Empire Elevator Company at Minneapolis.

Tromanhauser Bros. are building a 30,000-bushel elevator at Minneapolis for the Minnesota Grain and Cereal Company, T. J. Thompson, manager.

Reuben P. Wissler, grain buyer for the Omaha Elevator Company at Brady Island, Neb., was recently arrested for selling liquor without a license.

W. P. Harvey & Co. now own the Illinois Central Elevators "A," "B" and Annex at Chicago. The Buckinghams retain no interest in the elevators.

The Des Moines Mfg. & Supply Company of Des Moines, Ia., has recently furnished one of its center crank engines to T. H. Stynner of Cherokee, Ia.

P. D. Coryell of Glidden, Ia., recently built a grain elevator, using machinery furnished by the Des Moines Mfg. & Supply Company of Des Moines.

Chalmers Bros. & Bethune, elevator men at Pilot Mound, Man., have bought the McBean Elevator at Manitou, having a capacity for 35,000 bushels.

Keener & Pike, grain dealers at Meredosia, Ill., failed January 12. Liabilities, \$125,000; assets, much less. The firm operated warehouses at Perry Springs, Naples,

Chambersburg, and Versailles, and did a large business along the Illinois River. Extravagant living caused the failure.

George B. Kirkbride, grain dealer at Minneapolis, has sued Michael Phillip of Richmond, Minn., for \$584 in commissions and money advanced on wheat deals.

W. W. Catlin has withdrawn from, and Charles R. Massey has been admitted into the firm G. G. Moore & Co., dealers in grain and provisions at Chicago, Ill.

Having sold all its stock, the North Dakota Elevator Company will proceed with the erection of the proposed elevator at West Superior, Wis., as soon as possible.

A. P. Lamberton of Winona, Minn., has recently completed the erection of an office and an annex to his elevator, of 25,000 bushels' capacity, at a cost of \$7,000.

Frank Bros. of Petersburg, Ind., have bought a Victor Cleaner, a Victor Sheller and a complete elevator outfit of the Barnard & Leas Mfg. Company of Moline, Ill.

The Interior Elevator Company of Minneapolis, Minn., controlled by Peavey & Co., has amended its articles of incorporation to increase the capital stock to \$250,000.

The Columbia Starch Manufacturing Company has been incorporated at Chicago with \$100,000 capital by Leonard M. Hodges, W. C. Parker and Geo. I. Hodges.

Owing to damage by the recent fire, Pinto's elevators in Brooklyn, N. Y., have been declared irregular, thus cutting 450,000 bushels of wheat out of the visible supply.

T. J. Canley has built an elevator at Humboldt, Ia., using a complete outfit of machinery furnished by the Des Moines Mfg. & Supply Company of Des Moines, Ia.

Minter Bros. of Kansas City, Mo., have bought a Eureka Grain Cleaner and Separator of S. Howes of Silver Creek, N. Y., with a capacity of 2,000 bushels per hour.

Three Monitor Grain Cleaners have been placed in the Minnesota Elevator at Chicago. These machines were made by Huntley, Cranson & Hammond, Silver Creek, N. Y.

The car shortage prevented the two elevators at Elmwood, Neb., from shipping out, and they were filled up. Loaded wagons are standing around, and corn sells very cheap.

George O'Brien, who was charged with burning Thompson & Johnson's elevator at Fisher, Minn., has been tried at Crookston, found guilty and sentenced to the state reformatory.

The Avoca Farmers' Co-operative Company of Avoca, Minn., recently placed an order for elevator machinery with the Des Moines Mfg. & Supply Company of Des Moines, Ia.

When the new line of the Chicago, Rock Island & Pacific Railroad is completed down through Texas, then Kansas City will have an additional outlet to the sea for its grain trade.

The Manistee & Northwestern Railroad will, it is said, build docks and elevators at Manistee, Mich., to operate in connection with a line of steamers running across Lake Michigan.

One hundred loads of corn were the daily receipts of the elevators at Superior, Neb., one week recently. Guthrie Bros., at that place, have been taking in about fifty loads daily.

The Nye-Jenks Grain, Coal & Salt Company has been incorporated at Minneapolis, Minn., by J. M. Jenks of Minneapolis, William Timmerman of St. Paul, and Ray Nye of Fremont, Neb.

Darling & Conner, dealers in grain and flour at Portland, Ore., have dissolved partnership, R. S. Conner retiring, and W. M. Darling continuing the business and assuming all liabilities.

The 200,000-bushel elevator at Minneapolis, Minn., which has been built by the Consolidated Milling Company on the site of the former "Petit Mill," began business with the new year.

Two large No. 4 nine-section Prinz Smutters have been placed in the Minnesota Elevator at Chicago. These were furnished by the Prinz & Rau Manufacturing Company of Milwaukee, Wis.

The efforts of the Farmers' Alliance have not prevented the grain men at Wallace, Neb., from shipping 225,000 bushels of wheat this fall. The elevators have on some days received ten carloads.

Ten million bushels of grain were transhipped at Kingston, Ont., during the past season from lake vessels into river barges, which carried it down the St. Lawrence River to Montreal for export.

Lowenthal, Livingston & Co., grain commission dealers at San Francisco, Cal., failed January 6. Liabilities \$308,000; assets \$163,000. The firm speculated in wheat ship charters and lost heavily.

James Stewart & Co. of St. Louis, grain elevator builders, have contracted to build a 350,000-bushel elevator at New Orleans for the Texas & Pacific. Its receiving and loading capacity will be 15,000 bushels an hour.

The United States Linen Manufacturing Company has been incorporated at Chicago to manufacture American flax. Capital stock, \$3,000,000; incorporators, Andrew Spear, George F. Randall, and Thomas Wilson. The

company has experimented to its own satisfaction that home grown flax can be manufactured at less cost than foreign linen can be imported.

J. L. Swanton, superintendent of the Mulford Elevator Company of Minneapolis, Minn., has been presented with a sealskin cap and an overcoat of fine minkskin by the country agents of the company.

A gang of thieves near Denver, Colo., recently attempted to haul away the whole crop of a field of barley that had been threshed and bagged. They were discovered and the grain recovered.

The Western Elevator Company has been incorporated at Western, Saline Co., Neb. Capital stock \$10,000; incorporators N. M. Goodell, Peter Waldorf, W. C. Moore, W. S. Grafton and J. F. B'andin.

Geib & Darland, grain dealers at New York City, have dissolved partnership. J. V. Darland will continue the business under the firm name J. V. Darland & Co., with George E. Ketcham as partner.

The Farmers' Alliance of North Dakota held a secret meeting at Larimore recently. It transpired that the delegates were unanimously in favor of building elevators at Duluth or West Superior, Wis.

Van Epps & Cox of Fremont, O., have bought a complete elevator outfit, including a No. 0 Victor Sheller and one No. 0 Victor Cleaner of the Barnard & Leas Manufacturing Company of Moline, Ill.

Emery, Thierwechter & Co. of Oak Harbor, O., have purchased a complete elevator outfit, including a No. 0 Victor Corn Sheller and a No. 0 Victor Cleaner from the Barnard & Leas Mfg. Co. of Moline, Ill.

Kansas grain dealers complain that the state grain inspector at Kansas City, Kan., is discriminating against grain dealers throughout the state. A petition will be circulated asking the Governor to remove him.

The L. C. Porter Milling Company of Winona, Minn., has increased its storage capacity during the year to 200,000 bushels by the erection of a 75,000-bushel annex. Still another house is being erected, and it is now nearly complete.

The H. J. O'Neill Grain Company at Winona, Minn., managed to keep the elevator running during the grain blockade in the East. Shipments were sent West instead of East, and by that means business was kept in full blast all the time.

The steamer Dominion arrived at Buffalo recently with 3,000 bushels of wheat, in her cargo of 15,000, frozen. It was sold for 31½ cents, and after deducting the duty of 25 cents, only 6 cents remained for the owner. It was wet when shipped.

Barley is a staple crop in Northeastern Iowa. Brewers go thither from the East and buy at the highest market price. It pays the farmers well to raise barley, as an acre yields from 30 to 50 bushels, which brings on an average 50 cents a bushel.

A pair of power grain shovels has been placed in the Pillsbury "B" Elevator at Minneapolis, Minn., by the aid of which two men can in eight minutes unload a car, while formerly the combined labor of five men for fifteen minutes was required.

Manitoba's wheat crop is estimated at 23,181,599 bushels. The remainder of the Canadian Northwest brings the total up to 30,000,000 bushels. A scarcity of farm laborers to harvest the crop was the cause of considerable inconvenience and even loss to the producer.

Joseph Clark, representing an English syndicate, expects to control the entire wheat crop of Utah territory. He has already bought twenty-three, or all but six of Utah's flour mills, and will build a system of elevators in which to handle the wheat of the territory.

The new elevator built by the farmers at Humboldt, Neb., has been leased by them to a grain firm. They acted wisely. Sooner or later the farmers' elevators fall into the hands of grain dealers, who are the only ones properly qualified to conduct such enterprises.

The Norfolk & Atlantic Terminal Company has been incorporated at Newport News, Va., to build elevators, dry docks, etc. Incorporators, Barton Myers, Joseph T. Allen, D. Lowenberg, R. H. Baker and others; capital stock not less than \$25,000 nor more than \$5,000,000.

The Alliance Elevator and Stock Yards Company has been incorporated at Calloway, Butler Co., Neb. Capital stock, \$10,000; stockholders, James Stockham, Alfred Schreyer, William Engels, Frank Fochtman, John Fallin, J. N. Goar, James W. Patterson, N. M. Morgan, and W. N. Bertram.

The grain blockade in the United States has extended to Manitoba. The Canadian Pacific and the West Shore Railways carried large quantities for export from New York, but recently when the West Shore refused to receive further shipments, the Canadian Pacific was compelled to decrease receipts for Eastern shipment, causing loss to Manitoba dealers.

Lamson Bros. of Chicago have petitioned Judge Horton to dissolve the injunction preventing them from proceeding before the Board of Trade to have Thomas J. Ryan expelled for an alleged violation of the rules. The court thought that the injunction writ was too broad as it prevented the Board from suspending Ryan for any reason whatever, but the attorney for Ryan was given five days'

time to prepare a writ of supersedeas to the Appellate Court to continue the injunction. The previous history of this case was given in our last issue.

The elevator at Stockton, Ill., has been completed. It is fifty-six feet high to the top of the cupola, and has a capacity of 10,000 bushels. It is so arranged that one man can buy the grain, unload it from the farmers' wagons, weigh it, elevate it, and load it on the cars without assistance.

W. E. Coats & Co., grain dealers at Sparta, Wis., having stations at Bangor, Tomah, Oakdale, Camp Douglas, New Lisbon and Viroqua, failed January 8. Mr. Coats has executed a deed of all his available property to the Bank of Sparta. Speculation is supposed to have caused the downfall of Mr. Coats, who is mayor of the city, and highly respected by the citizens.

Schoelkopf & Matthews of Buffalo, N. Y., have recovered \$5,200 in commissions and charges which they had paid under protest to A. P. Wright & Son on 600,000 bushels of wheat bought in Chicago in 1888. Since the deal was first consummated the case has been in the courts, until Judge Daniels in the Supreme Court gave a judgment for the plaintiffs December 8.

The Eureka Transportation Company began business with headquarters in Kansas City on the first of the year, with a capital stock of \$2,000,000. They now have in service 1,000 cars, and expect to have 6,000 within the next six months. The principal business of the company will be to furnish cars to transport flour and grain from Minneapolis and other flour-producing centers.

The contract for rebuilding the elevator which was recently burned at Gladstone, Mich., has been given to Barnett & Record of Minneapolis, Minn. They built the burned elevator and several more for this railway, and the award of this contract shows that the company is well pleased with the work of Barnett & Record, of which they have had ample opportunity to judge.

A notorious grain thief named Charles Gage has carried on operations with a high hand in Sumner, Cowley and Harper counties, Kan., but came to grief at last, being arrested at Wichita. Once he hired many wagons and teams at Wellington, drove into the country and emptied a wheat bin he claimed as his own. In this way he obtained several thousand bushels at different times.

A daring attempt to steal a carload of wheat was made at Willow Lakes on the Great Northern Railway in South Dakota. A farmer had ordered a car in which to ship. It arrived Saturday and on Sunday, January 3, a man named Palmer pushed the car up to the elevator, pulled a slide and filled the car with wheat. He got a bill of lading from the railroad agent and went to the bank to get an advance of \$200, which would have been given him had he not become frightened and fled.

A recent issue of the *Barberton Herald and Transvaal Mining Mail*, published at Barberton, Transvaal Republic, South Africa, notes the starting of a mill built by the Nordyke & Marmon Company of Indianapolis, Ind., for Bowness & Co. at Barberton, who are operating mills built by both English and American mill furnishers. The comparisons made are highly flattering to the American builders. The American-built engines which furnish power for at least two of their mills are spoken of in the highest terms.—*Indianapolis Journal*.

The D. H. Martin Elevator Company has brought suit against E. Holmes & Co. at Minneapolis, Minn., for a balance of \$173.29. Holmes & Co. state that a quantity of grain was sold by them to the elevator company, which refused to receive it and extended the time in violation of the contract. Before the extended time had expired the price of grain depreciated and the elevator company refused to accept it at all. The grain was therefore, according to the custom of the Chamber of Commerce, sold by auction at a loss of \$173.29, which the company was compelled to pay and for which a judgment is asked.

The Missouri Elevator & Terminal Company was incorporated at Kansas City January 4 to build elevators and conduct a grain business. Capital stock, \$100,000, of which Arthur E. Stilwell, Arthur A. Mosher, Alfred L. Howe, and Robert B. Cone own ten shares apiece, and Arthur E. Stilwell, as trustee, 960 shares; par value, \$100. The company has begun to build three elevators on the Martin Belt Railway, to be known as the "Star," "Sun," and "Suburban" elevators. T. J. Templar of Kansas City will use one of the houses and Charles Counselman & Co. of Chicago will use another, as a transfer and mixing house chiefly, but it will have a storage capacity of 300,000 bushels.

Observing the hundreds of carloads of Western grain that have passed through St. John, N. B., within the past few weeks, bound for Halifax, there to take ship for Europe, members of the Board of Trade in the former city have been considering ways and means of securing the shipment of some of this Western grain at their own port by vessel. Halifax has elevator facilities, St. John has not. The question with St. John men now is whether to get elevators or something that will replace them. A scheme has been propounded by Robert Cruickshank, which is considered feasible and is not costly. It is to extend the C. P. R. track west around the side of Lancaster Heights. Thereabout the river bank is high, and the water deep; berths could be readily made there to accommodate two large steamers at once. The railway track extended around the side of the hill would be at an elevation of between 60 and 80 feet above high water,

and at a small cost chutes could be made that would carry the grain down over the hillside to the steamers as rapidly as it could run from the cars. This would be a much cheaper way than handling the grain with an elevator.

Considerable alarm has been created among the Baltimore grain merchants as to what shall become of the Maryland trade in wheat and corn. Vessels coming up the Patapsco loaded with grain from various parts of Maryland and Virginia have hitherto unloaded at the B. & O. Elevators. But an order has gone into effect that no more such grain will be received at these elevators, the reason assigned being that the consignments of grain coming from the West are greater than can be promptly disposed of. But it must be evident that a small elevator is needed, especially for the local trade. It is a significant fact that the grain trade from various landings on the Chesapeake and its tributaries has reached proportions which have embarrassed the railroad company's elevators, and now there is danger of losing it, because a special elevator of sufficient capacity to handle this traffic is not in working order.—*Baltimore Herald*.

Latest Decisions.

Exchange—By-Law—Expulsion.

The Philadelphia Court of Common Pleas No. 4 held, in the recent case of Sexton vs. Commercial Exchange of Philadelphia, that a by-law of the exchange which provides for the exclusion of a member from the floor of the exchange who fails to meet his contracts with other members, was a good and lawful by-law.

Recovery for Delay in Delivering an Unrepeated Message.

The provision of a telegraph blank that "Errors can be guarded against only by repeating a message back to the sending station for comparison, and the company will not hold itself liable for errors or delay in transmission or delivery of unrepeated messages beyond the amount of tolls paid thereon, not in any case when the claim is not presented in writing within sixty days after sending the message," is not a bar to an action for damages resulting from delay in delivering an unrepeated message, as the action is not founded on any error which repeating could have cured, and the liability of the company is the same for the prompt delivery of unrepeated and repeated messages.—*Western Union Telegraph Company vs. Lowrey, Supreme Court of Nebraska*.

Carrier—Storage Rates—Reasonableness.

According to the decision of the Supreme Court of Georgia, in the case of Miller et. al. vs. Georgia Railroad Company, it is competent for a common carrier, whose customers at their option have the privilege of unloading for themselves the vehicles in which their freights are shipped, to adopt and enforce a reasonable regulation as to the time within which the vehicles may be unloaded free of any expense for storage, and to fix a reasonable rate per day at which storage will thereafter be charged for the use of such vehicles so long as they remain unloaded. In this case the court held that a rate of \$1 per day for each railroad car thus devoted to the use of storage freight was not necessarily unreasonable, because cars were of different sizes and varied in capacity, nor because a fraction of a day was charged for as a whole day, nor because the customary rate of storage in warehouses or elevators was much lower, and that it was not, as a matter of law, unreasonable for any cause.

Warehouse Receipts—Construction.

In the case of Stein vs. Rheinstrom, recently decided by the Supreme Court of Minnesota, it appeared that in certain warehouse receipts, issued to a third party and purchased by the plaintiff, there was a clause whereby the warehouseman stipulated to deliver a certain number of gallons of whisky on return of the receipts and "payment of the whisky, the United States government and state tax, interest, and charges." The court held that although the words "payment of the whisky" were indefinite and ambiguous, it was obvious that a prepayment of some kind was required in addition to the government and state tax, interest, and charges, and that by the use of this language the plaintiff was notified of an infirmity in the receipts, and he was bound to inquire the meaning, or, failing to do so, to suffer the consequences. The court said that the purchaser of what purports to be, or is said to be, negotiable paper must exercise ordinary prudence in respect to knowledge derived from an inspection of the paper.

S. Howes of Silver Creek, N. Y., well known as a manufacturer of grain cleaning machinery, several years ago organized the Eureka Fire Company for the protection of the extensive Eureka Works. Like the public-spirited citizen that he is, Mr. Howes has placed at the command of the chief of the village fire department the Eureka hose carriage and well equipped hook and ladder truck, to be operated in connection with a powerful Worthing Pump in the Eureka Works.

WATERWAYS

Navigation on the Sault Ste. Marie Canal was open during 225 days of the past season.

The Sault Ste. Marie Canal during the season of 1891 passed 38,816,670 bushels of wheat and 882,154 bushels of corn, besides 3,779,458 barrels of flour.

Representative Lind of Minnesota has drawn up a bill providing for an outlet for the commerce of the Great Lakes through the Welland Canal and St. Lawrence River.

Representative Castle of Minnesota has introduced into Congress a bill appropriating \$40,000 for a survey to establish a canal from the St. Croix River to Lake Superior.

A bill providing for the survey of a ship canal to connect Lake Erie and the Ohio River has been introduced in the House of Representatives by Mr. Dalzell of Pennsylvania.

Those interested in the commerce of Montreal are seeking to have the port dues reduced by the removal of the hospital and police tax which is levied on all vessels, and tends to divert trade to other ports.

The city council of Grand Forks, S. D., recently adopted a memorial to Congress asking the passage of Senator Casey's bill for an appropriation of \$150,000 for constructing dams and locks in the interests of navigation.

Much progress has been made in the construction of the Nicaragua Canal in the year just ended. The annual report of the Maritime Canal Company also shows that extensive wharves and convenient landings have been completed at San Juan del Norte.

Detroit has shipped during the season of navigation just closed: 4,589,033 bushels wheat, 201,611 bushels corn, 400,224 bushels rye, total 5,190,868 bushels; against 2,961,378 bushels wheat, 372,798 bushels corn, total, 3,344,176 bushels for 1890; but in 1887 Detroit shipped 6,115,525 bushels wheat and 456,824 bushels corn.

The Western river improvement convention met in Kansas City December 16 and was brought to order by Gov. Thayer of Nebraska. After hearing numerous addresses the report of the committee on resolutions was adopted, demanding an appropriation of \$6,000,000 annually for improving the Missouri River, and \$7,000,000 for the Mississippi.

When navigation ceased on the Erie Canal the railways at once advanced rates from Buffalo to New York. Could a more convincing argument be made in favor of a deep waterway from Buffalo to the Hudson? If the Erie Canal with its six or seven feet depth can compel the railways to reduce rates, how much greater would be the influence of a ship canal?

The Minneapolis, St. Paul & Buffalo Steamship Company has been incorporated by W. D. Washburn, J. S. Pillsbury, R. B. Langdon, F. D. Underwood, Thomas Lowry, and C. E. Wales. The capital stock is \$500,000. A line of lake carrying vessels will be operated between Gladstone, Mich., and Buffalo, N. Y., in connection with the "Soo" railway.

During the season 10,224 vessels entered and 10,294 vessels cleared from the port of Chicago. New York comes second with 8,196 arrivals and 7,818 clearances, Boston ranks third, and Pt. Townsend, Wash., fourth. Chicago shipped during 1891, by lake, 30,770,000 bushels wheat, 39,800,000 bushels corn; 17,728,000 bushels oats, 5,480,000 bushels rye, 1,628,900 bushels barley, and 6,184,703 bushels of flaxseed.

The barge Champion, as stated in our last issue, was loaded in November at Chicago with corn for Buffalo, and was tied up in Milwaukee. After the vessel had been laid up in that city for two months the price of corn had fallen 30 cents, and it became necessary to ship the cargo to Liverpool to apply on the original contract before January 20, or a loss would be sustained on the 36,000 bushels. Accordingly it was shipped by rail to New York, and thence to Liverpool.

Had it not been for the heavy crops of 1891 the commerce of the great lakes would have languished. Indeed, at the beginning of the season vesselmen hesitated to place their boats in commission, so gloomy was the outlook; but matters improved later, and a fair year's business was done. At the opening of next season the remainder of the crops of the Northwest will give a good send off to the year's traffic. The prospects in the iron ore and coal trades are not such as to assure vesselmen a prosperous season.

A bill has been prepared by Hon. W. C. Gear of Wyandot providing for the abandonment of a portion of the canal system of the state of Ohio. All the canal property is to be sold except the Miami and Erie Canal from Toledo to Cincinnati and that portion of the Ohio Canal between Cleveland and Dresden. The general government has improved the Muskingum River and it is proposed that the state and the general government shall divert the Ohio Canal into the Muskingum at Dresden

so that Lake Erie boats could pass into the Ohio River at Marietta. The cost of the improvement is estimated at \$18,000,000.

The annual report of the Canal Commissioners filed with the governor of Illinois, shows the total receipts of the year to be \$79,005 01; total disbursements, \$79,300 07; balance on hand, \$66,037 07. The report also shows that the tolls of the Illinois and Michigan Canal were \$5,000 less than the previous year.

The manager of the Baltimore & Ohio Railroad Company's elevators at Locust Point, Baltimore, have notified all the receivers of water-borne grain that hereafter they will not receive any grain into their elevators that is brought in sailing or steam vessels. This has been done to reserve all the space for grain received in cars over the railroad company's tracks. The Baltimore Elevator Company, which has its elevators at Canton, has not received any water borne grain this season, and has made no provisions for handling it. Most of the grain coming by water to Baltimore is from the eastern shore of Maryland and Virginia. The railroad company has refused to receive the water-borne grain into its elevators several times before whenever it thought it necessary to protect those who ship the grain over its road.—*New York Commercial Bulletin*.

Notwithstanding the enormous exports of grain the Erie Canal shipments were 6,000,000 bushels less than in 1890; while the railroads, on the other hand, delivered at New York this year more than twice as much grain as last year. Various causes combined to produce this effect. Besides the constant discrimination in elevating charges the canal boatmen were harassed by unwarranted delays in loading. At the time when receipts at Buffalo ran high the railroad grain elevators ignored the rights of the boatmen and put off the loading of canal boats in order to empty the railroad line steamers with all possible dispatch. Low water and breaks in the canal had but little effect in decreasing shipments. To crush canal competition the railways made such low rates that the elevators having rail connection were swamped with the grain arriving, while at the same time elevators having no rail connection were kept idle, to the loss of both vessel owners and the canal boatmen.

A deep water convention was held in Detroit December 17 to consider the improvement of the channels connecting the great lakes. Among those present were delegates from commercial organizations, representatives of transportation companies, prominent vessel owners, Members of Congress and others interested in lake commerce. The convention adjourned after appointing a committee on resolutions. This committee debated the comparative value of a deep channel between Duluth and Buffalo and Buffalo to the sea. A sub-committee on the channel to the sea was appointed and the committee adjourned. When the convention assembled next day the committee reported a lengthy memorial to the Senate and House of Representatives, setting forth the history of lake navigation and dilating upon the importance of a twenty-foot channel from Buffalo to Chicago and Duluth. It was resolved, "That this convention does hereby respectfully and earnestly request and urge Congress to authorize the immediate commencement and completion of an unobstructed channel, not less than twenty feet in depth and of sufficient width, through the lakes and their connecting waters, between Chicago, Duluth and Superior and Buffalo, and that the Secretary of War be authorized to make contracts for the entire work and a sufficient sum of money be appropriated therefor. That this convention strongly favors the improvement of the Hudson River to a navigable depth of twenty feet from Coxsackie to Troy."

OBITUARY

W. W. Gould, grain dealer at Batavia, N. Y., is dead.

Herbert S. Fall, dealer in grain and lumber at Boston, Mass., is dead.

Henry Hosmer, an old member of the Chicago Board of Trade, is dead.

Gibson Cook, dealer in grain and groceries at Brantford, Ont., is dead.

Thomas Armstrong, grain dealer and banker at Albert Lea, Minn., is dead.

George Martin, grain dealer at Boissevain, Man., is dead. He was 70 years of age.

George A. Howell of Howell Bros., grain dealers and millers at Trenton, N. J., is dead.

J. H. Fallin, the sole member of the firm of J. H. Fallin & Co., grain commission dealers at Baltimore, Md., is dead.

E. E. Holt, for many years an elevator manager at Minneapolis, Minn., died December 7 while visiting his daughter at Hyde Park, Ill. He was 68 years old.

John Shannon, well known on the Baltimore Corn and Flour Exchange, died December 26, aged 45 years. He was formerly in the grain trade at Baltimore and later with a Chicago firm, but for several years he has reported markets for newspapers and for a time was managing editor of the *Baltimore Journal of Commerce*. He left a widow and three children.

THE EXCHANGES

Chicago Board of Trade memberships are selling at \$1,125

A commercial exchange is being organized at West Superior, Wis.

Tickets of membership in the New York Produce Exchange are selling at \$900.

Certificates of membership in the Buffalo Merchants' Exchange are selling as low as \$30.

On January 1 the St. Louis Merchants' Exchange had 3,000 members, which is 116 less than the membership a year ago.

The Minneapolis Chamber of Commerce has instructed its building committee to examine into the advisability of enlarging the exchange building.

The clearing house report of the Chicago Board of Trade shows that the business of 1891 aggregated \$104,083,529, against \$86,627,157 in 1890.

Kennett & Hopkins, well known on the Chicago Board of Trade, have been suspended by the directors for violating the rules by sending out continuous quotations.

The Omaha Board of Trade at its annual election chose H. G. Clark, S. A. McWhorter, and James A. Conner directors for the three-year term, and C. H. Fowler director for two years.

The Milwaukee Chamber of Commerce has decided that grain buyers and millers can make no reduction from the actual weight of grain as determined by the Chamber of Commerce weighers.

The Minneapolis Board of Trade at its first annual meeting in 1892 considered the matter of a waterway from the Great Lakes to the Sea. The efforts made by Senator Davis were favorably commented on.

Friends of E. L. Harper, who tried to run a corner in wheat a few years ago and was sentenced in 1887 to the penitentiary for ten years, have made efforts to have him pardoned but without success. The President refuses to grant it.

W. H. Murray, an old member of the Chicago Board of Trade, once a partner of N. K. Fairbank and later with Charles Schwartz, has retired and will leave for Colorado where he expects to make good his recent losses on the Board.

After two hours of business the Chicago Board of Trade on December 31 celebrated the end of the year in the customary manner. Several hundred pounds of flour, grain, etc., in sample packages were thrown on every one who came on the floor. When the ammunition was exhausted President Baker arrived and quelled the disturbance.

The New York Produce Exchange will, it is said, do away with private wires on the trading floor. The small traders who cannot afford the luxury of a private wire to Chicago claim that the twelve firms having such wires are able to get quotations quicker than those who depend on the telegraph company, and in that way have a business advantage over the small dealers.

Traders on the Chicago Board were taken in the other day by Ed. Partridge. Usually his brokers sell privileges without reserve, but on this occasion he changed his tactics and directed his brokers to buy puts. The traders surmised that he was about to force the market to the put price, and, expecting a reaction, accordingly sold freely at about 96½ cents. Partridge seized the opportunity, and in an hour quietly bought up a million bushels. When this was discovered by the brokers, the price began to move up until Mr. Partridge had made a profit of just one cent per bushel on one million bushels of wheat.

The Chicago Board of Trade held its annual election January 4, and resulted as follows: President, C. D. Hamill; second vice-president, R. J. Chandler; directors, T. A. Wright, L. J. Smith, John Hill, Jr., W. S. Booth, and R. S. Lyon. Appeals committee, W. T. Baker, J. L. Ward, George M. Barber, M. Rosenbaum, and Joseph Stiles. Arbitration committee, William Nast, J. R. Hodson, E. S. Jones, George Thomas, and J. J. McDermid. James T. Rawleigh became first vice president, under the by-laws, without an election. The result is taken to mean a more liberal policy. Great interest was manifested in the election; more votes were cast than in any previous one.

The Toledo Produce Exchange on January 5 elected the following officers and committees for the current year: President, Frank I. King; vice-president, Ezra L. Southworth; second vice-president, Fred. O. Paddock; secretary, Denison B. Smith, and treasurer, William T. Carrington. Directors, J. Frank Zahn, Charles L. Reynolds, Frank W. Annin, James Blass, William M. Bellman, Milton Churchill, Thomas A. Taylor, Julius J. Coon, Henry W. Devore, and William E. Cratz. Committee on arbitration, Charles A. King, Fred. J. Reynolds, Frederick C. Chapin, James Hodge, Chas. Stager,

Leroy S. Churchill, and Frank H. Tanner. Committee on appeals, Frank N. Quale, George A. White, E. Delano Draper, Vincent Hamilton, William A. Rundell, Charles L. Cutter, Henry Crazz, Charles W. Coe, Steven W. Flower, Reuben B. Mitchell, and A. H. Hathaway.

As a result of the boisterous onslaught of the flour brigade in the Kansas City Board of Trade, the last day of the old year, Alfred Hertz made out a bill to F. T. Smith et al. for damages, as follows: 1 new hat (old one destroyed), \$3.50; 1 new tie, \$.75; cleaning clothing, \$3; cleaning office (3 hours at 30 cents), \$9, and for mental anguish and nervous excitement, \$25.

George F. Stone, secretary of the Chicago Board of Trade, expects to introduce a resolution, already adopted by the Chicago Board at the annual meeting of the National Board of Trade in Washington, instructing its secretary to correspond with all boards of trade in America and foreign countries, asking their co-operation in organizing a great international board of trade to meet in Chicago in 1893, and settle many questions relating to weights, measures, money, etc., etc.

As the directors of the Chicago Board of Trade were about to hear and consider charges made by Elick Loutz against Baldwin & Farnum, on the afternoon of January 8, two deputy sheriffs strode into the room and served the directors and President Steever with an injunction restraining them from hearing any evidence furnished by Loutz. A constable attempted to arrest Loutz, who was in the waiting-room, but he backed into the directors' room where Mr. Steever and Director Healy seized the constable, who then drew a revolver and flourished it in the air. On learning that he was an officer, Loutz was told to go with him, and thus was the disgraceful affair ended. Elick Loutz was in the employ of Baldwin & Farnum for nine years, first as settling boy and afterward as bookkeeper and trader on the floor. He left the firm and became a scalper, but failed and went to Denver. After an absence of two years he returned to the Board of Trade, and circulated charges affecting the business integrity of his former employers. He alleges that Baldwin & Farnum, when prices fluctuated widely, defrauded customers by substituting accounts; that false figures were substituted for the real prices, in the interest of the firm. It is claimed by him, in specifying, that among those swindled were Farnum, Rardon & Co. of Boston, Washington Butcher's Sons, Walter Hull, H. H. Dennis, and others. It is charged that Loutz is a person of bad character and given to making reckless charges and statements. His arrest was for alleged blackmail and the larceny of the trading cards, etc., by which he expected to prove the criminality of Baldwin & Farnum. The affair gives rise to the charge that some Board of Trade firms are in the habit of making a profit out of trades on an active market by misreporting the prices at which grain is bought and sold. Thus a customer in the country may wire his broker to "buy 10,000 wheat on the market" which, in the parlance of the Board, is "an open order," no price being set. It is left to the broker to use his judgment and buy it as cheaply as he can. In some instances—but happily they are rare—the temptation is so great that the broker reports the grain bought at, say, 98%, when in reality it only cost him 98%. Then when the customer orders the deal closed there is a chance to misreport the selling price, and in this way a sure profit in addition to the commission is secured.

MINNESOTA GRAIN INSPECTION.

The sixth annual report of the Minnesota Grain Inspection Department covers its transactions for the crop year ending Aug. 31, 1891. It is gratifying to note the evidence of continued growth in the productiveness of the Northwest, and the constantly increasing volume of business in grain handling at the terminal markets of the state.

The number of carloads of spring wheat inspected "on arrival" for the crop year was 112,930; winter wheat 4,211 cars; coarse grain, including flax, 15,532 cars, being a total of 132,673 carloads as against 130,654 carloads last season. There were inspected "out of store" during the same period, 41,661 cars spring wheat; 2,854 cars winter wheat and 6,749 cars coarse grain, or a total of 50,764 carloads against 36,467 carloads last season. The total number of carloads "into" and "out of" store for the crop year just closed was 183,437 as against 167,638 cars the preceding year, indicating a gain of 15,799 cars. There was also inspected "out of store" into vessels, 14,022,207 bushels spring wheat, 785,224 bushels winter wheat, 1,673,499 bushels of coarse grain, and 119,372 bushels flaxseed, a total of 16,600,302 bushels of all kinds of grain as against 20,992,668 bushels the previous year, a falling off of 4,392,366 bushels in cargo shipments.

For the purpose of farther comparison with the business of previous years Chief Grain Inspector Clausen appends a table which exhibits in a concise form the organization up to the present time:

NUMBER OF CARLOADS INSPECTED "ON ARRIVAL."			
	Wheat.	Coarse Grain.	Total No. Carloads.
Season of 1885-86.....	92,886	4,767	97,653
Season of 1886-87.....	113,923	6,412	120,335
Season of 1887-88.....	115,215	8,637	123,852
Season of 1888-89.....	74,068	13,410	87,478
Season of 1889-90.....	107,979	22,675	130,654
Season of 1890-91.....	117,141	15,532	132,673

INSPECTED "OUT OF STORE" INTO CARS.

	No. Cars Wheat.	No. Cars Coarse Grain.	Total No. Carloads.
Season of 1885-86.....	13,414	—	13,414
Season of 1886-87.....	24,004	—	24,004
Season of 1887-88.....	30,899	—	30,899
Season of 1888-89.....	31,210	965	32,175
Season of 1889-90.....	30,941	5,526	36,467
Season of 1890-91.....	44,015	6,749	50,764

INSPECTED "OUT OF STORE" INTO VESSELS.

	Wheat.	Coarse Grain.	Total No. Bushels.
Season of 1885-86.....	14,518,813	110,967	14,629,780
Season of 1886-87.....	21,340,663	206,468	21,547,131
Season of 1887-88.....	16,867,410	206,568	17,073,978
Season of 1888-89.....	5,561,111	1,428,069	6,989,180
Season of 1889-90.....	17,416,788	3,575,480	20,992,268
Season of 1890-91.....	14,807,431	1,792,871	16,600,302

There was quite a perceptible falling off in the receipts of coarse grain as compared with those of the preceding year which was owing largely to the decrease in acreage and yield in the territory tributary to Minnesota markets.

A particularly noticeable feature in the business of the department for the past year is the remarkable increase in the receipts of flaxseed over those of former years. The total number of cars of flaxseed inspected during the crop year was 2,631 as against 1,299 cars in 1889-90, and as against a yearly average of 825 cars in the four years preceding the crop of 1889-90.

The character of the spring wheat crop was only a fair average as to quality, the inspections showing that the proportion which went into the two highest grades was hardly up to the average of former years, as a glance at the following table will demonstrate:

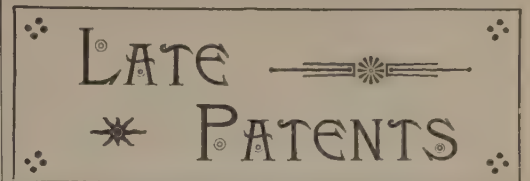
	Cars 1 hard.	Per cent.	Cars 1 north.	Per cent.	Cars 2 north.	Per cent.	Cars below 2 nd .	Per cent.	Total carloads.
Season of 1885-86.....	34,925	38	32,755	35	14,817	16	10,392	11	92,886
Season of 1886-87.....	63,339	56	36,519	32	8,443	7	5,622	5	113,923
Season of 1887-88.....	57,696	50	31,043	27	15,306	14	11,176	9	115,215
Season of 1888-89.....	8,976	12	19,048	26	20,772	28	25,272	34	74,068
Season of 1889-90.....	21,606	20	68,296	63	10,992	10	7,085	7	107,978
Season of 1890-91.....	5,958	5	63,847	56	27,104	24	16,021	15	112,930

Re-inspections were called on 11,483 cars out of a total of 210,269 inspected. The original grade was sustained in 4,456 cases, and changed in 5,713 cases; the dockages were changed on 1,314 carloads. There was but one appeal made to the Railroad and Warehouse Commission from the decisions made under re-inspections, and in this case the department was overruled. This almost entire absence from appeals would warrant the conclusion that the adjustments made by the chief deputies in their reinspection work were almost universally satisfactory.

In concluding his report Chief Inspector A. C. Clausen says that the work during the past year has as a whole, progressed smoothly and satisfactorily. Individual complaints have been much less prevalent than in former seasons owing to an increased knowledge as to our grades and standards on the part of the public and more improved methods and increased experience on our own part. With one notable exception our efforts to render a good service have met with general approbation. An attempt to discredit our work was made by a so-called "Grain Growers' Association" composed of several persons who claimed to represent the producers of the state. The opportunity presented itself in June last, at the hearing before the legislative investigating committee in reference to the public elevators of the state. It is sufficient to say that whatever the motives may have been which actuated this unjust attack, whether sincere or otherwise, if it results in a better understanding of the object and methods of our work, and accomplishes such changes in our grain laws as have for years been advocated by the Commission and the department, legislation which is imperatively needed to perfect the system and produce the most beneficial results, then all can well afford to waive any farther inquiry into the motives which prompted it.

Someone who has been looking into the past says: In the past eleven years there are five instances of an advancing wheat market in January, six instances of a declining one. In the past nineteen years there have been nine instances of an advancing wheat market in January, ten of a declining. August has been in the past twenty-three years a favorite month for low prices, April for high prices.

The National Starch Company had its inception Feb. 20, 1890, at a meeting in Buffalo, N. Y., of the leading starch manufacturers of the United States. The starch trust was finally organized in March; and incorporated at Covington, Ky., with ten million dollars capital. Hiram Duryea was elected president, and Frank Schuler secretary. Eighteen factories were placed under the absolute control of the trust; the only large factory on the outside is the Kingsford Starch Company, whose goods do not compete with the trust. The price was gradually raised from \$50 to \$80 per ton; and an agreement was made with wholesale grocers by which they were to buy only of the trust and to maintain trust prices.



Issued on December 15, 1891.

ELEVATOR AND CONVEYOR.—Frank T. Patterson and Alphonse Feldpauche, Philadelphia, Pa. (No model.) No. 466,298. Serial No. 301,935. Filed March 5, 1889.

ELEVATOR AND DUMP.—William H. Enos, Chebanse, Ill. (No model.) No. 465,171. Serial No. 376,445. Filed Jan. 2, 1891.

GRAIN DRYER FLOOR.—Johann H. E. Rathman, Buffalo, N. Y. (No model.) No. 465,203. Serial No. 394,385. Filed May 28, 1891.

GRAIN WEIGHER.—Albert J. Neville, Canton, Ill. (No model.) No. 465,025. Serial No. 383,749. Filed March 4, 1891.

ENDLESS CHAIN ELEVATOR.—Benjamin Arnold, East Greenwich, R. I. (No model.) No. 465,318. Serial No. 402,199. Filed Aug. 10, 1891.

APPARATUS FOR STIRRING OR TURNING OVER MALT OR GRAIN.—Julius Sandt and Heinrich Sturm, Loban, Germany. (No model.) No. 465,209. Serial No. 391,718. Filed May 6, 1891.

Issued on December 22, 1891.

GRAIN BIN ALARM.—John H. Nichols, Sheldon, Ia. (No model.) No. 465,488. Serial No. 389,404. Filed July 13, 1891.

CONVEYOR.—John Connley and Henry J. Vieth, Barrington, R. I., assignor to said Connley. (No model.) No. 465,463. Serial No. 372,130. Filed Nov. 21, 1891.

FEEDER FOR BALING PRESS.—John W. Brown and Albert A. Gehrt, Quincy, Ill., assignor to the Collins Plow Company, same place. (No model.) No. 465,520. Serial No. 400,924. Filed July 18, 1891.

AUTOMATIC GRAIN SCALE.—Francis H. Richards, Hartford, Conn. (No model.) No. 465,535. Serial No. 395,029. Filed June 4, 1891.

HAY PRESS.—George W. Arnold, Toronto, Canada. (No model.) No. 465,772. Serial No. 356,694. Filed June 25, 1890. Patented in Canada March 26, 1890, No. 33,989.

Issued on December 29, 1891.

GRAIN METER.—Hugh B. Stinson, Morris, Minn. (No model.) No. 466,312. Serial No. 393,871. Filed May 23, 1891.

GRAIN SEPARATOR.—Richard A. Kelly, Webster City, Ia. (No model.) No. 466,243. Serial No. 381,810. Filed Aug. 13, 1888. Renewed Feb. 18, 1891.

GRAIN CLEANING AND SEPARATING MACHINE.—Charles Clossz, St. Ansgar, Ia. (No model.) No. 466,125. Serial No. 392,301. Filed May 11, 1891.

CONVEYOR.—Charles W. Hunt, West New Brighton, N. Y. (No model.) No. 466,039. Serial No. 395,196. Filed June 5, 1891.

CONVEYOR.—Charles W. Hunt, West New Brighton, N. Y. (No model.) No. 466,040. Serial No. 395,197. Filed June 5, 1891.

CONVEYOR.—Charles W. Hunt, West New Brighton, N. Y. (No model.) No. 466,041. Serial No. 395,198. Filed June 5, 1891.

CONVEYOR.—Charles W. Hunt, West New Brighton, N. Y. (No model.) No. 466,043. Serial No. 398,900. Filed July 9, 1891.



Ernest F. Smith has been elected secretary of the Chicago Elevators' Association.

William J. Rairdon has been made manager of the Queen City Elevators at Buffalo, N. Y.

A. M. Ingersoll, formerly of Janesville, Wis., is president of the Elevator Company at Tacoma, Wash.

General Becker has been reappointed to the Minnesota Railroad and Warehouse Commission by Gov. Merriam in recognition of his efficient services.

William H. Harper, treasurer and manager of the Chicago & Pacific Elevator Company, has been elected president of the Chicago Elevators' Association.

J. H. Tromahouser of Tromahouser Bros., the well-known grain elevator architects and builders at Minneapolis, Minn., was married December 29 to Miss Mary Rice of Port Huron, Mich. After the ceremony was performed they started on a tour of the Eastern cities.

D. D. Morse of H. B. Goodwin & Co. of Boston was honored December 15 by a banquet, at which fifty grain and flour dealers were present to testify their appreciation of his services as chairman of the grain inspection committee for eleven years. Mr. Morse recently left that position to take the chairmanship of the transportation committee.

CROP ❖ CONDITIONS.

So far no damage is reported from freezing and thawing weather in Illinois. The growth of the wheat is small, while a year ago it was large. The wheat is not strong enough to stand the severities of winter and the trials of spring.

MINNESOTA, AIRLIE, PIPESTONE CO., DECEMBER 24 —Crops were very heavy around this place last fall; about one-half has been sold. Over three thousand acres were broken within three miles of this place last summer. —WALTER PARKS.

There is a slight covering of snow on more or less of the wheat in Indiana, and the reports show that the crop has improved considerably since the 1st of November. The late sown wheat did not all come up. Farmers have been free sellers during December.

Kentucky reports that the wheat is backward, that the early wheat looks very well, but the late wheat looks sickly, but is improving. While the condition is not equal to a year ago, farmers who have wheat feel that the prospects are good enough to sell what they have.

The general condition of the winter wheat crop of Kansas is by no means uniform. The ground has been generally bare. It is an open question which time alone can solve, whether or not the wheat is strong enough to stand severe weather. As compared with a year ago the plants are smaller, and not as vigorous.

Chancellor Snow of Kansas, is receiving letters from all over the state saying that the Hessian fly is doing great damage to the wheat fields in various sections. It is reported that in some places the damage is so severe as to threaten the total destruction of the crop. From some parts of the state come reports that there is a new insect troubling the wheat, and an investigation is asked for in regard to it.

Texas reports that the outlook of the wheat is fairly good, but the crop was put back very much by the drouth during October and November. December rains, however, have helped the crop, and while more or less damage is very apparent, still with favorable spring weather close on to an average yield is looked for. Millers are not generally well stocked, but farmers are beginning to sell more freely.

The Washington crop bulletin says: There is an abundance of moisture in the winter wheat region, but owing to the drouth at planting time and the consequent undeveloped state of the plant, the outcome of the crop depends largely upon the future weather conditions. The abnormally high temperature during the past month has doubtless improved the condition of the crop, which is not, however, in a state to resist the severe winter unless protected by snow.

The Iowa crop and weather bureau has made its final report for the year. The figures are based upon the reports from over 900 correspondents, representing every county in the state. The bureau says: The round-up of the season's product shows that 1891 was the most prosperous year ever enjoyed by the husbandmen of Iowa. It was exceptional in this, that nearly all the products of the fields, orchards, vineyards, gardens and forests were up to their average, and some of them largely in excess. There was an acreage of 8,816,621 acres in corn, with a total yield of 335,031,598 bushels, valued at \$100,509,478. The acreage of oats was 2,895,270, giving a yield of 115,810,900 bushels, valued at \$26,636,484; wheat acreage was 2,071,682 acres, yielding 33,151,488 bushels, valued at \$25,741,039.

The January crop report issued by the Michigan secretary of state shows that wheat was injured very little, if at all, during December. About one-fourth of the correspondents in the southern section of the state express the belief that some injury occurred, but the belief evidently is based on the fact that the ground was practically bare of snow all the month, rather than on the appearance of the plant. About three-fourths of them report no injury. In the central and northern counties about one-third of the correspondents report injury, and the remainder no injury. The total number of bushels of wheat marketed in August, September, October, November and December is 8,869,647, which is 1,139,275 bushels more than was reported marketed in the same months last year. The average price of wheat Jan. 1, 1892, was 88 cents per bushel; of corn 49 cents, and of oats 33 cents, and the average price of hay was \$1.90 per ton. Compared with one year ago there is a decline in the price of wheat of 1 cent, of corn 7 cents, and of oats 11 cents per bushel.

The estimates by states and territories of the area, product and value of the prices of cereals in the United States for 1891, by the statistician of the Department of Agriculture, is as follows: The crops of corn, wheat and oats, including all but 2 or 3 per cent. of the cereals, are reported. The total for corn has been exceeded but once. The wheat product is the largest ever grown in the country, and the yield per acre in the United States is the largest ever reported by the Department of Agriculture. The total for oats was slightly exceeded in 1889. The aggregates are as follows: Corn—Area, 76,204,515 acres; product, 2,061,154,000 bushels; value, \$836,439,220. Wheat—Area, 39,916,897 acres; product, 611,780,000 bushels; value, \$513,472,711. Oats—Area, 25,581,861 acres; product, 736,394,000 bushels; value, \$232,312,267. The aggregate of all cereals is the largest produced, and

will supply 54@55 bushels per unit of population. The wheat supply is the largest ever reported in proportion to population, averaging 9.4, against 9.2 for the largest previous crop in 1884. The average value to the farmer is 40.6 cents for corn, 83.93 cents for wheat, and 31.46 cents for oats. The value of wheat is greater than in any year since 1883, that of the short crop of 1888 alone excepted. The products are in measured bushels.

The grain yield in Ontario, according to the bureau of industry, has been unusually large. The fall and spring wheat crop is estimated at 38,584,026 bushels, nearly one-half larger than for 1890. The oat crop exceeds by 22,000,000 bushels last year's light crop, and the average prairie crop is the highest in ten years; 140,000 fewer acres were sown in barley than last year, but the yield is 541,737 bushels more. The root crops are described as enormous. Fall wheat has averaged 25 to 30 bushels an acre in many sections, and weighs 60 to 66 pounds per bushel.

ITEMS FROM ABROAD

A recent estimate places the Belgian wheat crop at 16,000,000 bushels.

The governor of Durango, Mexico, has verified the report that the people of his state are dying of starvation.

Odessa had in store December 14 3,976,000 bushels of wheat, 134,000 bushels of corn, and 1,258,000 bushels of barley.

Barley imports into the United Kingdom from September 1 to December 12 were 21,617,791 bushels, against 19,607,600 bushels for the corresponding period of 1890.

The United Kingdom imported from September 1 to December 12 14,834,240 bushels of oats, against 13,689,889 bushels during the corresponding period of 1890.

India continues to ship large quantities of wheat. From April 1 to Jan. 9, 1892, the exports were 45,500,006 bushels, against 21,500,000 bushels in the same time of 1890-91.

As soon as the Special Commission is convinced that famine-stricken provinces of Russia have been sufficiently supplied the embargo on all except rye exports will be removed, so it is said.

France's barley crop is officially estimated at 77,600,000 bushels, against 49,800,000 bushels in 1890. The yield of oats was 340,640,000 bushels, against 304,380,000 bushels, and 274,360,000 bushels in 1890 and 1889 respectively.

Liverpool on January 1 had in store 2,960,000 bushels of wheat, 295,000 bushels of corn, and 125,000 280-pound packages of flour, against 2,848,000 bushels of wheat, 1,098,000 bushels of corn, and 103,000 packages of flour one year ago.

Glasgow, Scotland, last year imported 4,200,000 bushels wheat, exported 892,000 bushels, and had in store January 1 496,000 bushels; imported 1,800,000 bushels oats, exported 408,000 bushels, had in store 161,000 bushels; imported 3,437,000 bushels corn, exported 1,242,000 bushels, had in store 68,000 bushels; imported 2,175,000 bushels barley, exported 616,000 bushels, and had in store January 1, 175,000 bushels.

The crops of European Russia and Poland are estimated by the Central Statistical Committee of Russia at 126,057,000 bushels wheat, 358,028,000 bushels rye, 294,228,000 bushels oats, 112,588,000 bushels barley, 26,354,000 bushels maize, and 7,000,000 tons of potatoes, and the requirements for consumption, seedling, etc., for the ten months ending next July at 78,642,000 bushels wheat, 380,000,000 bushels rye, 267,128,000 bushels oats, 61,311,000 bushels barley, 4,140,000 bushels maize, and 3,000,000 tons of potatoes. It would seem that, taken as a whole, Russia is not in danger of a serious famine, and that if the last harvest were husbanded carefully and judiciously distributed to the needy all over the country there would be no great suffering anywhere.

At a recent meeting in St. Paul, the Great Northern Railroad refused to join the other roads represented in an agreement to make grain rates that would discriminate against Duluth in favor of Minneapolis.

Following is a statement of the visible supply of grain afloat and in store on Saturday, January 9: Wheat, 45,604,903 bushels; decrease, 63,821 bushels. Corn, 7,919,465 bushels; increase, 838,269 bushels. Oats, 3,667,835 bushels; decrease, 194,744 bushels. Rye, 2,184,484 bushels; decrease, 131,501 bushels. Barley, 1,945,701 bushels; decrease, 325,842 bushels. The principal increase in stocks of wheat for the week was as follows: Chicago, 208,391 bushels; Chicago afloat, 68,515 bushels; Duluth, 454,347 bushels; Minneapolis, 145,116 bushels; Montreal, 187,977 bushels; St. Louis, afloat, 65,000 bushels. The principal decrease in wheat was as follows: Baltimore, 374,988 bushels; Buffalo, 188,000 bushels; Detroit, 128,600 bushels; Kansas City, 89,585 bushels; New York, 266,777 bushels; New York afloat, 40,000 bushels; Philadelphia, 69,649 bushels; St. Louis, 150,013 bushels; on Mississippi, 70,800 bushels.

Fires, Casualties, Etc.

Max Jarek's distillery at Lawrens, S. C., was burned recently.

A warehouse at Vienna, Ill., was burned December 27. Loss \$15,000.

A brewery at Germantown, Pa., was burned December 10. Loss, \$25,000.

E. R. Weems, grain dealer at Birmingham, Ala., has recently suffered loss by fire.

The brewery of the Fidalgo Brewing Company at Anacortes, Wash., was burned recently.

Hiram Sibley's eight-story seed house in Rochester, N. Y., was burned January 12. Loss \$75,000.

Church & Harrah, dealers in grain and feed at Oklahoma, Okla. Terr., suffered loss by fire recently.

Frank E. Minnette's brewery at Sauk Center, Minn., was burned recently. Loss, \$2,000; no insurance.

L. Wells, grain dealer at Vermillion, O., recently suffered a loss of \$3,000 by fire. Insurance, \$1,200.

A grain elevator and furniture factory at Nashua, N. H., were burned December 31. Total loss \$37,000.

John Foerster's rice mill at New Orleans, La., was burned December 12. Loss, \$50,000; partially insured.

A distillery at Nebraska City, Neb., owned by the Nebraska City Distillery Company, was burned recently.

Mullen & Melick, dealers in grain and agricultural implements at Alamosa, Ala., recently lost \$1,500 by fire.

Thieves cracked the safe in Sprohl & Hasting's grain warehouse at Atglen, Pa., November 12, and abstracted \$40.

The malt house of the Windsor Brewing and Malting Company at Windsor, Ont., was burned recently. Loss, \$5,000.

A malt house with 10,000 bushels barley at Erie, Pa., was damaged by fire December 27. Loss \$50,000; fully insured.

An elevator at Chicago was burned at 1:30 A. M., January 10, together with Cowles & McKee's feed store. Loss \$15,000.

The Lake Erie & Western Railway grain elevator at Findlay, O., was burned December 12. Loss, \$100,000; small insurance.

Frank Green, a carpenter, while at work under an elevator corn crib at Greeley Center, Neb., recently, was paralyzed in his lower limbs by the crib falling on him.

Elevator "A" of the Pabst Brewing Company at Milwaukee, Wis., was damaged to the extent of \$5,000 by a fire which started in the cupola at 9 P. M., December 19. Its origin is unknown. Loss covered by insurance.

M. R. Armington's grain elevator at Natrona, Ill., was burned December 9. The fire started in the engine room and swept all before it. Loss on corn \$400; insured; on building \$3,500; insurance \$2,200. It will be rebuilt at once.

The New Rockford Roller Mills and Elevator at New Rockford, N. D., were burned January 2. Loss \$20,000; insurance \$7,000. It was owned by Chas. Hutchins of Des Moines, Ia., and operated by Owen & Perry, bankers.

The oil mill and warehouse at Rapidan, Minn., were burned on the morning of January 10, together with an adjoining flour mill containing 10,000 bushels of wheat. The flaxseed warehouse contained 20,000 bushels, insured for \$10,000. The grain and machinery of the flour mill were insured for \$10,000.

The four-story grain warehouse of Francis G. Pinto & Sons at Brooklyn, N. Y., was burned on the evening of January 3. The flames spread to the grain elevator and, in order to extinguish them, the firemen poured a large volume of water into the structure, thus doing great damage to the grain in store. The fire was of spontaneous origin.

Taylor Bros.' new grain elevator at Cooper's Point in Camden, N. J., was totally destroyed on the morning of December 22 by a fire that started in a hay loft at one end of the building from sparks puffed out by a switching engine on the tracks that run through the house. The Camden & Atlantic Railroad owned the building, and had some insurance. Loss on contents, \$30,000; insurance, \$20,000.

Two boys named Matthew Hulberts and Andrew Heilman amused themselves on the afternoon of December 31 in an elevator at Kentland, Ind., by jumping into the bin containing the shelled corn. They were testing their ability to extricate themselves after having been drawn down part way with the sinking grain, which was being drawn off at the bottom. Hulberts, in his desire to outdo his companion, stayed in too long, sank beneath the surface and was smothered to death.

NEW RULES GOVERNING REGULAR WAREHOUSES AT MINNEAPOLIS.

The Minneapolis Chamber of Commerce has adopted new rules governing regular warehouses and has thereby made the certificates of houses operating under rules of the Chamber better securities. At present ten houses are operating under these rules, while only four are operating under the state laws. The new rules are as follows:

SECTION 1.—The proprietors or managers of such warehouses shall be in unquestioned good financial standing and credit.

SEC. 2.—Such warehouses shall be so situated that they can be conveniently connected by railroad tracks with one or more of the Eastern railway lines.

SEC. 3.—They shall be provided with modern improvements and appliances for the convenient and expeditious receiving, handling and shipping of grain in bulk.

SEC. 4.—The proprietors or managers shall honestly and cordially comply with the requirements of the rules of the Chamber of Commerce, and furnish to the secretary all needed information to enable him to keep a correct record and account of all grain, together with the grade thereof, received and delivered by them daily, and of that remaining in store at the close of each week.

SEC. 5.—The proprietors and managers of such warehouses shall promptly, by the proper publication, advise the trade and the public of any damage to grain held in store by them, whenever such damage shall occur to an extent that will render them unwilling to purchase and withdraw from store, at their own cost, all such damaged grain.

SEC. 6.—Any important change in the conditions of any warehouse, or disregard or evasions of the above requirements, shall at any time be a sufficient cause for declaring any such warehouse no longer a regular warehouse within the meaning of the rules of the Chamber of Commerce.

SEC. 7.—Elevators operating under the State Warehouse Law which shall file with the secretary a weekly report of grain in store, shall be considered regular, and their receipts deliverable on contract.

SEC. 8.—The person, firm or company operating warehouses which are regular, shall file with the president of the Chamber of Commerce a bond, with good and sufficient sureties, to be approved by the board of directors, in the penal sum of not less than 10 cents per bushel, upon the capacity of the house, for each warehouse made regular, conditional for the faithful performance of their duty as public warehousemen, and their full and unreserved compliance with all the rules of the Chamber of Commerce in relation thereto.

SEC. 9.—Upon the application of the owner or consignee of grain stored in public warehouse, the same being accompanied with evidence that all transportation or other charge which may be a lien upon the grain, including charges for inspection and weighing, have been paid, the warehouseman shall issue to the person entitled to receive it, a warehouse receipt therefor, subject to the order of the owner or consignee, which receipt shall bear date corresponding with the receipt of the grain in store, and shall state upon its face the quality and inspected grade of the grain, and that the grain mentioned on it has been received into store, to be stored with grain of the same grade by inspection, and that it is deliverable upon the return of the receipt, properly indorsed by the person to whose order it was issued, and the payment of proper charges for storage. All warehouse receipts for grain, issued by the same warehouse, shall be consecutively numbered, and no two receipts bearing the same number shall be issued from the same warehouse during any one year, except in the case of a lost or destroyed receipt, in which case the new receipt shall bear the same date and number as the original, and shall be plainly marked on its face, "Duplicate." If the grain was received from railroad cars, the number of each car shall be stated upon the receipt, with the amount it contained.

SEC. 10.—Upon the delivery of grain from store upon any receipt, such receipt shall be plainly marked across its face, the word "Cancelled," with the name of the person cancelling the same, and shall thereafter be void, and shall not again be put in circulation, nor shall grain be delivered twice upon the same receipt. No warehouse receipt shall be issued, except upon actual delivery of grain into store in the warehouse from which it purports to be issued, and which is to be represented by the receipts. Nor shall any receipt be issued for a greater quantity of grain than was contained in the lot or parcel stated to have been received. Nor shall more than one receipt be issued for the same lot of grain, except in cases where receipt for a part of a lot is desired, and then the aggregate receipt for a particular lot, shall cover that lot, and no more. In cases where a part of the grain represented by the receipt, is delivered out of store, and the remainder is left, a new receipt may be issued for such remainder, but the new receipt shall bear the same date as the original, and shall state on the face that it is balance of receipt of the original number, and the receipt upon which a part has been delivered, shall be cancelled in the same manner as if it had all been delivered. In case it be desirable to divide one receipt into two or more, or in case it be desirable to consolidate two or more receipts into one and the warehouseman consents thereto, the original receipt shall be cancelled, the same as if the grain had been delivered from store and the new receipts shall express on their face that they are part of another receipt, or a consolidation of other receipts, as the case may be, and the numbers of the original receipts shall

also appear upon the new ones issued, as explanatory of the change; but no consolidation of receipts of dates differing more than ten (10) days shall be permitted, and all new receipts issued for old ones cancelled, as herein provided, shall bear the same date as those originally issued, as near as may be.

SEC. 11.—No warehouseman whose receipts are made regular, shall insert in any receipt issued by him, any language in any wise limiting or modifying his liabilities or responsibility as imposed by the laws of this state.

SEC. 12.—On the return of any warehouse receipts by him properly indorsed and the tender of all proper charges upon the property represented by it, such property shall be immediately deliverable to the holder of such receipt, and it shall not be subject to any further charges for storage, after demand for such delivery shall have been made, and the property represented by such receipt, shall be delivered within twenty-four (24) hours after such demand shall have been made, and the cars for the same shall have been furnished.

SEC. 13.—It shall be the duty of every owner, lessee, manager of every regular warehouse to furnish in writing, under oath, at such times as the board of directors shall require and prescribe, a statement concerning the condition and management of the business, as such warehouseman.

SEC. 14.—They shall also be required to furnish daily to the said registrar a correct statement of the amount of each kind and grade of grain received in store in such warehouse on the previous day, also the amount of each kind and grade of grain delivered or shipped by warehouseman during the previous day, and what warehouse receipts have been cancelled, upon which the grain has been delivered on such days, giving the number of each receipt, and amount, kind and grade of grain received and shipped upon each; also how much grain, if any, was delivered or shipped, and the kind and grade of it, for which warehouse receipts had not been issued, and when and how such unrecipited grain was received by them, the aggregate of such reported cancellations and delivery of unrecipited grain corresponding in amount, kind and grade with the amount as reported delivered or shipped. They shall also at the same time report what receipts, if any, have been cancelled, and new ones issued in their stead, as herein provided for. And the warehouseman making such statements shall, in addition, furnish the said registrar any further information regarding receipts issued or canceled that may enable him to keep a full and correct record of all receipts issued and cancelled, and of grain received and delivered.

SEC. 15.—There shall be appointed by the board of directors an officer called the registrar, whose duties it shall be to act as registrar with the spirit and intent of Sec 14 of this rule. All bills for expenditures on account of this office shall be passed upon by the board of directors, as in the case of other disbursements, and shall be paid semi-annually to the Chamber of Commerce by the warehousemen who operate as regular houses in proportion to the amount of receipts registered.

SEC. 16.—Each owner of regular elevators or warehouses shall present to the registrar each and every warehouse receipt for check and registration before the issuance of same to any person. The registrar is directed to compare the same with the records of his office and if he shall find that the same is issued for grain actually received in store into the elevator or warehouse and is for the correct quantity of grain as received therein, he is directed and authorized to stamp the same with his official stamp as registered, and to make record thereof in the proper books of his office.

On the surrender to any owner of regular elevators or warehouses of any elevator receipt registered for delivery or shipment out of the grain represented thereby, the same shall be by said elevator owner presented to the registrar with a list showing the shipment made, for cancellation of the registration thereof, and that officer is directed and authorized to cancel such registration upon the receipt by his official stamp, if the shipment or delivery shall be for the same quantity of grain as shall be certified to him to have been shipped on the cars mentioned in said list, and he shall make due record of such cancellation on the proper books of the office.

The registrar shall make no registration or cancellation of warehouse receipts, unless the same shall agree with the weights as certified to by the weighmaster of the state of Minnesota, and in case any differences shall at any time exist he shall institute a thorough examination thereof and shall have such error corrected before affixing the stamp. If it shall at any time appear that any fraud in the issuance of warehouse receipts shall have been attempted, he shall at once report the same to the president of the Chamber of Commerce.

In case by change of law or from other cause, there shall be no weighmaster of the state of Minnesota on duty in any elevator or warehouse, weighmasters shall be appointed by this board, and all reference in these rules to the state weighmasters shall be held to apply to the Chamber of Commerce weighmasters so appointed.

The Minneapolis Chamber of Commerce does not assume any liabilities on account of such registration.

The above rule was adopted by the Chamber of Commerce of Minneapolis, on the 26th day of September, 1891, and has been in force since that date.

With wheat and flour rates via Gladstone the same as via Duluth, and the time materially shortened by the former route, it looks as if the Duluth newspapers would have to chew the rag considerably next season.—*Minneapolis Journal*.

FLAXSEED AT CHICAGO.

The monthly receipts and shipments of flaxseed during the last two years at Chicago, according to the report of Flax Inspector Stevens, were as follows:

Months.	Received, Bush.		Shipped, Bush.	
	1891.	1890.	1891.	1890.
January.....	264,000	164,500	199,040	157,698
February.....	172,700	122,500	231,913	84,462
March.....	265,650	98,000	451,215	131,890
April.....	396,550	98,000	599,309	158,957
May.....	329,350	69,500	463,559	121,587
June.....	414,150	48,500	483,208	59,818
July.....	315,150	129,500	556,559	57,574
August.....	574,200	1,056,500	401,685	520,380
September.....	2,728,000	1,999,000	1,491,710	955,790
October.....	2,891,900	1,821,000	2,520,724	1,315,468
November.....	3,023,350	1,162,000	1,516,779	703,476
December.....	1,855,150	537,000	558,582	555,902
Total.....	13,229,150	7,296,000	9,474,283	4,627,001

The total number of cars received during the year was 23,779, against 14,590 in 1890, and 6,989 in 1889. Of the receipts last year 21,604 cars were graded No. 1, 1,785 cars rejected, and 390 cars no grade.

The receipts for the preceding year were graded as follows: 13,093 cars No. 1, 968 rejected, and 529 no grade. In 1889 6,601 cars were graded No. 1, 279 rejected, and 109 no grade.

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The following standard works will be sent, postage paid, on receipt of prices given:

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CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains sixteen tables, and is neatly bound in leatherette. Price.....\$1.50

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For any of the above, address
MITCHELL BROS. Co., 184 and 186 Dearborn street, Chicago, Ill.

NEW GRADES FOR CLIPPED OATS.

At a meeting of the Illinois Board of Railroad and Warehouse Commissioners, held in Chicago Jan. 5, 1892, it was ordered that Rule Four (4) of rules governing the inspection of grain in the city of Chicago be amended by the addition of the following:

"Number 1 white clipped oats shall be white, sound, clean, reasonably free from other grain, and shall weigh not less than 36 pounds to the measured bushel.

"No. 2 white clipped oats shall be seven-eighths white, sweet, reasonably clean, reasonably free from other grain, and shall weigh not less than 34 pounds to the measured bushel."

These amendments to take effect and be in force on and after Feb. 1, 1892.

Regarding the establishment of a regular grade of oats to be known as "No. 2 white clipped," a shipper said: "New York has a regular No. 2 white clipped grade weighing 35 pounds to the measured bushel, and as this classification is well known among European buyers, and much of the foreign business is done on such a basis, we should have a like grade here. This would enable us to sell direct to foreigners and avoid possible confusion about the weight here and across the ocean."

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A number of new factories have been induced to locate—largely through the instrumentality of this company—at enterprising towns on its lines.

As the interest of the company is to secure the location of industries at places where the surroundings will insure their permanent success, the information furnished a particular industry is pertinent and reliable.

In the Eastern states, and in other parts of the world, factories are so congested and distant from the actual market as to result in fierce and destructive competition. That the West is taking a place as one of the great manufacturing territories of the world is forcibly impressing itself upon discerning and enterprising manufacturers. Steps should be taken by such while the field is as yet not fully covered, and while inducements are still being offered, to locate in the West.

Individuals or companies wishing to embark capital in Western industry can find a profitable field.

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Miscellaneous * * * * Notices *

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Kingsley's Directory is the only complete work containing the name and address of every firm engaged in the following lines of business: Grain, milling, flour and feed, hay and straw, butter and eggs, fruit and produce, malting, brewing, distilling and poultry. New edition, thoroughly revised, 1891. Over 500 pages octavo, substantially bound in cloth. Indispensable to those who wish to reach the lines of business named above.

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I have for sale in good order: One Clutch; one No. O Band one No. G Nonpareil Feed Mills; one No. 2 Magic Feed Mill; one No. New 4½ Scientific Feed Mill; one No. 2 Morgan Scourer; one extra heavy letter press; one double 6 ft. 6 in. by 30 in. hexagon scalping reels, etc. Address

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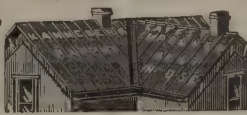
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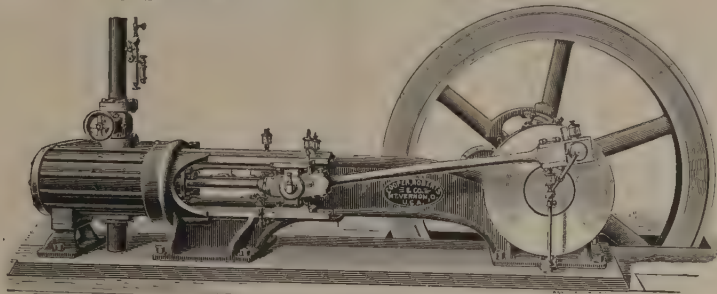
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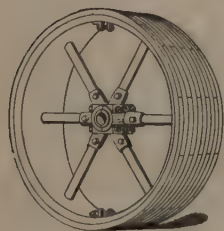
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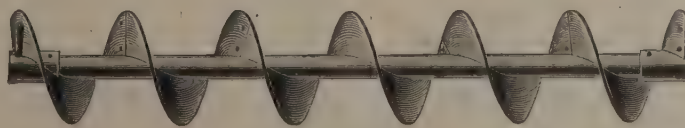
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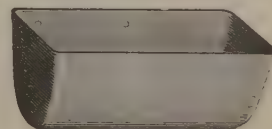
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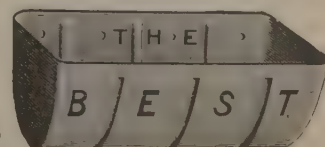
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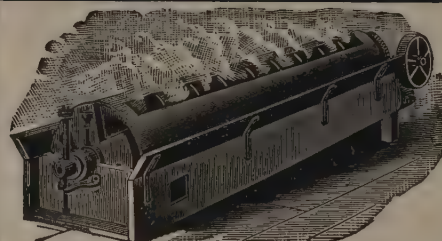
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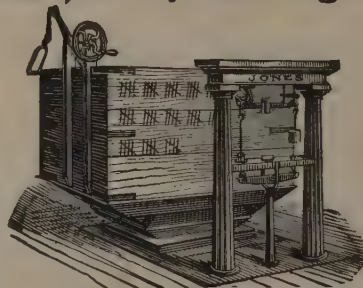
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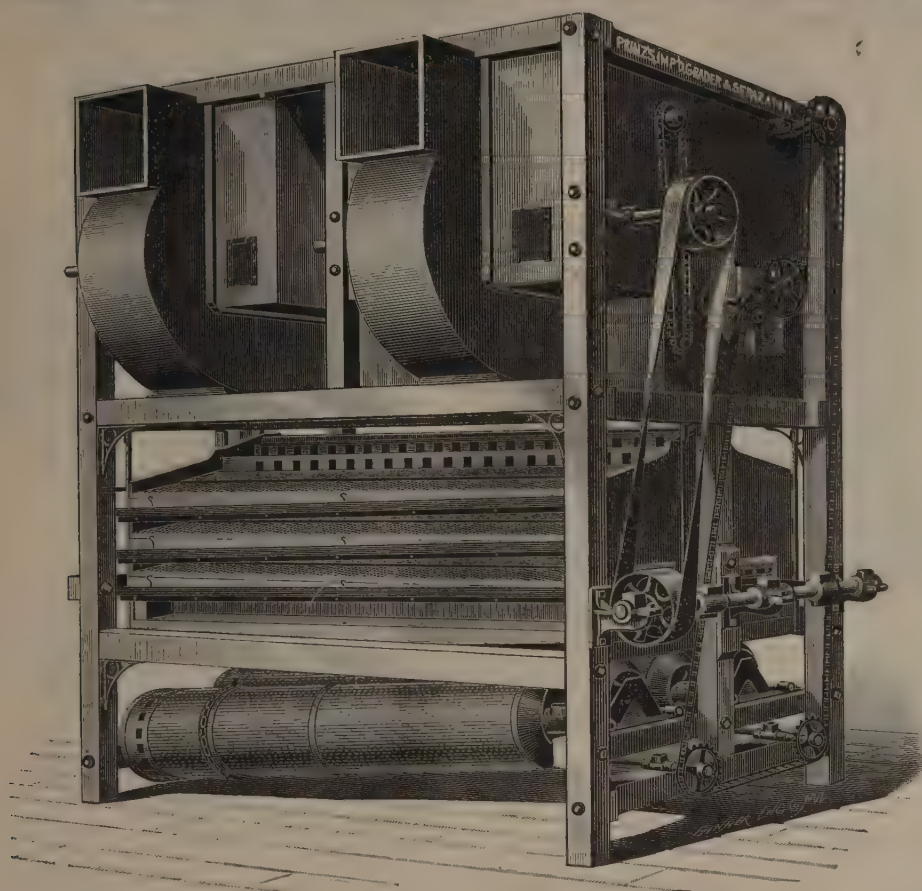
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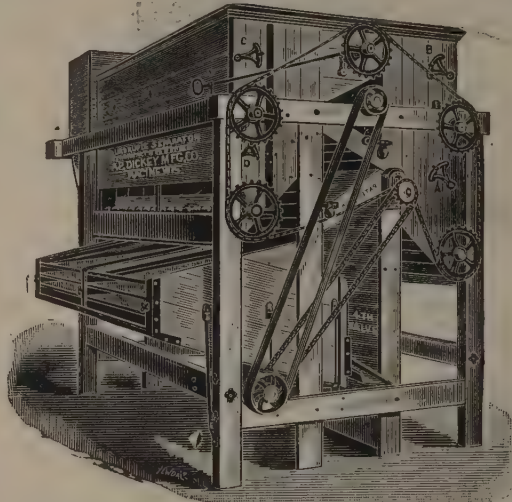
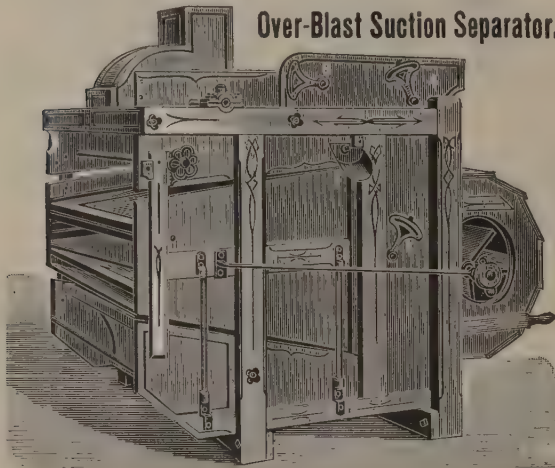
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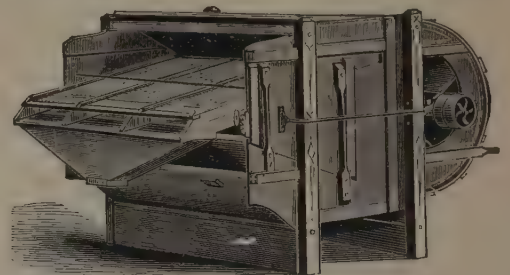
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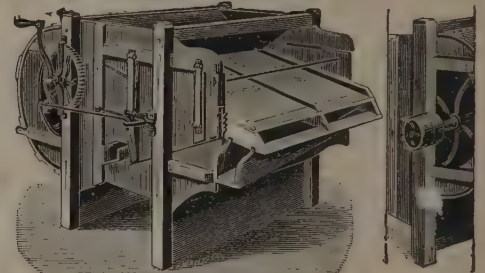
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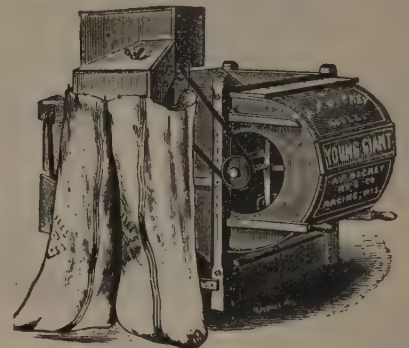
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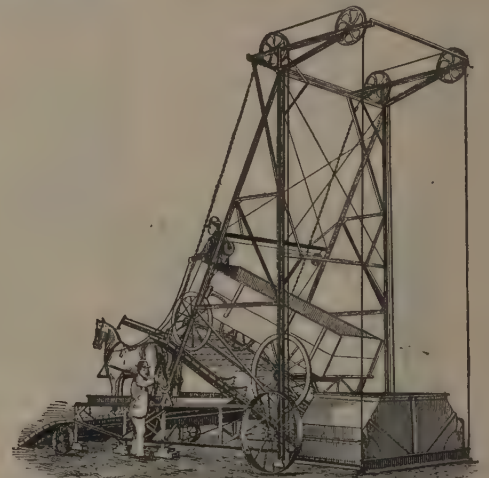
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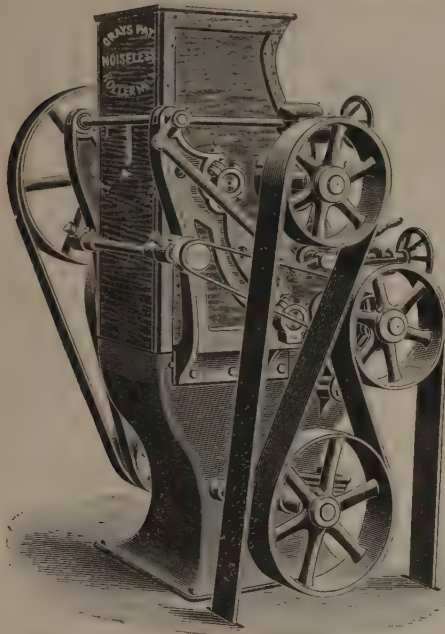
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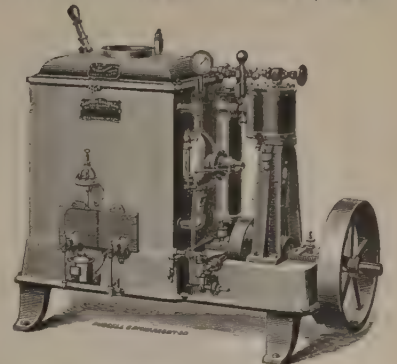
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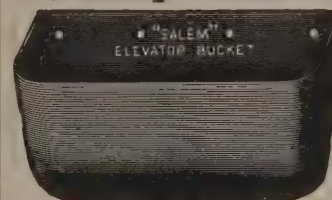
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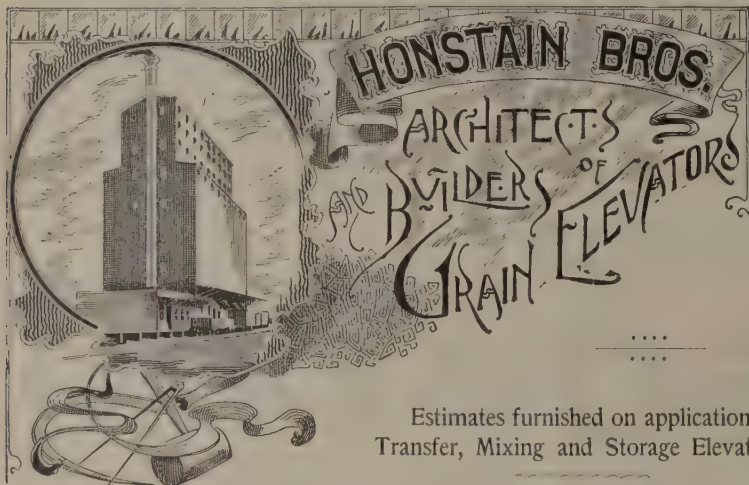
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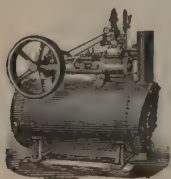
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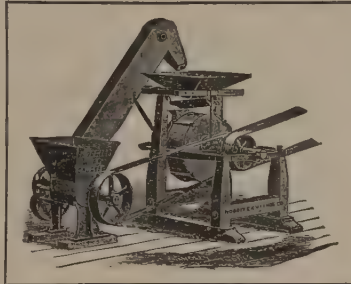
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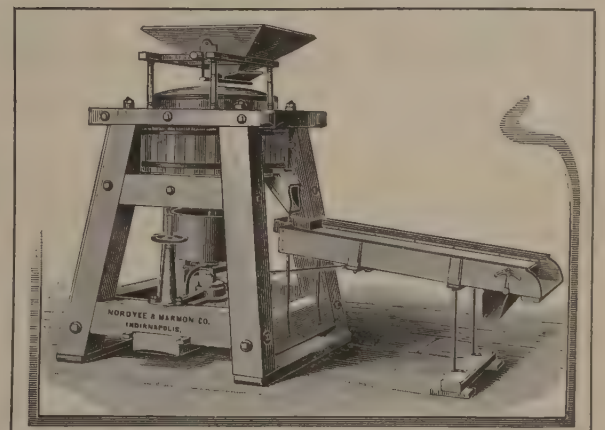
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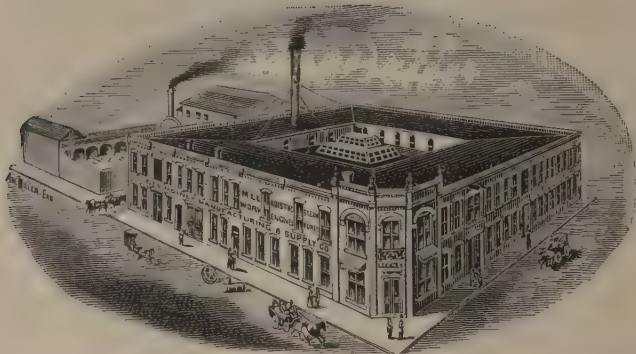
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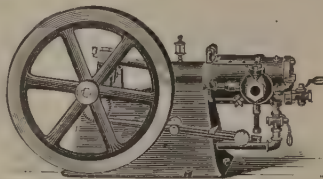
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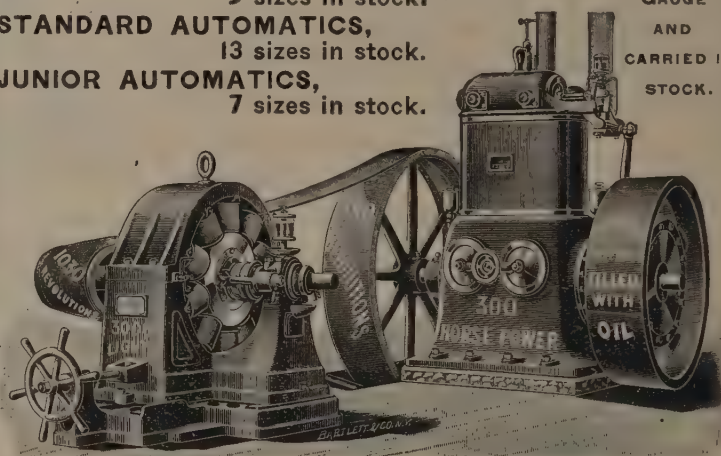
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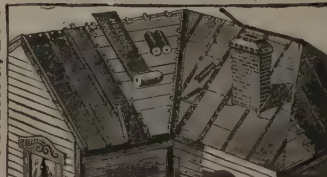


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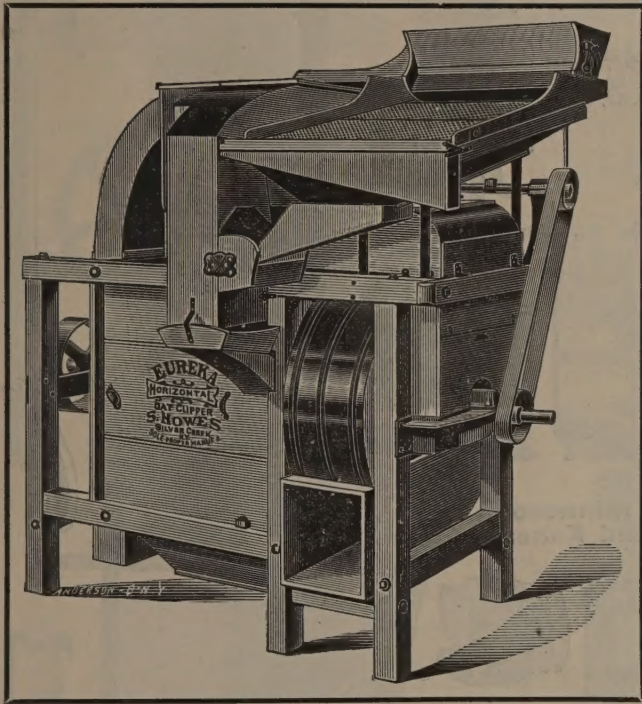
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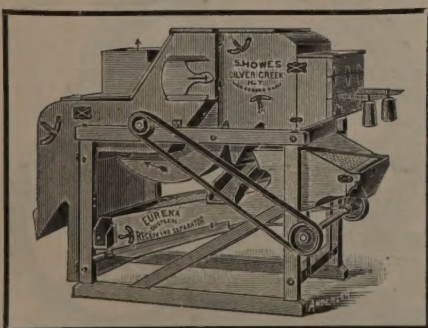
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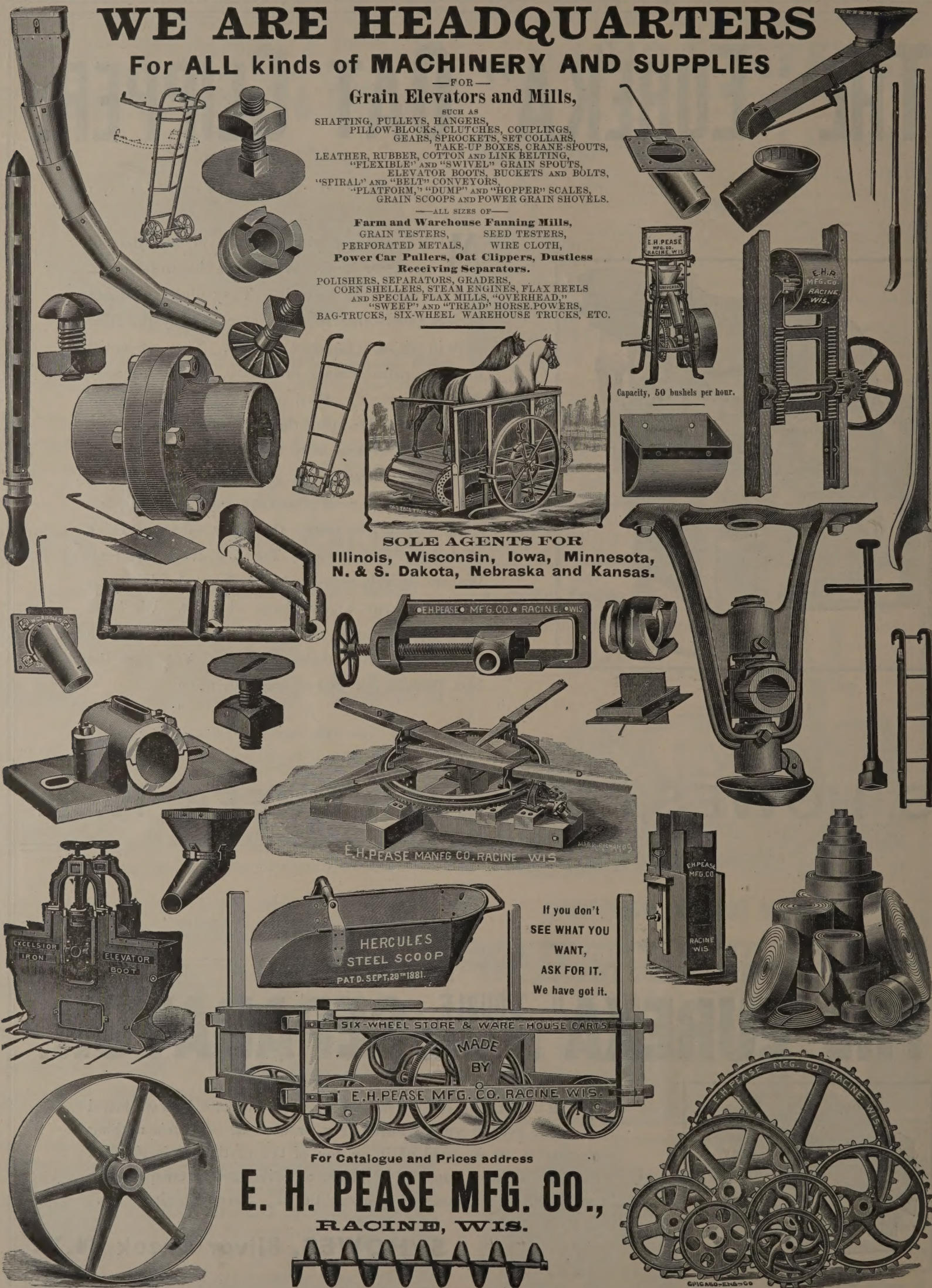
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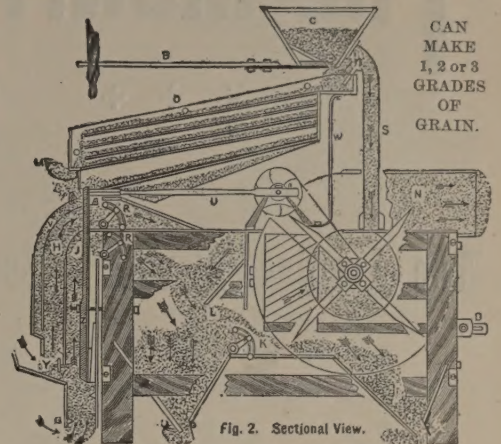
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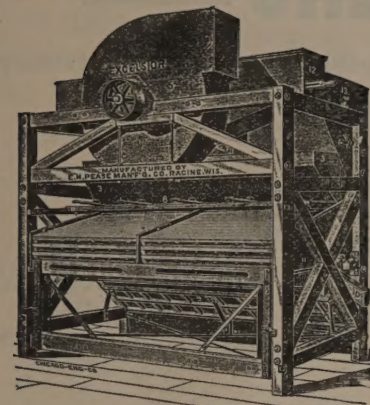
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FLAX REELS AND SPECIAL FLAX MILLS,
"OVERHEAD," "SWEEP" and "TREAD" HORSE POWERS.
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.



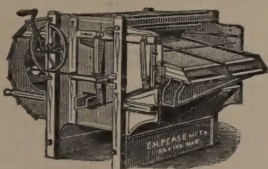
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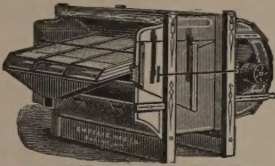


EXCELSIOR DUSTLESS ELEVATOR SEPARATOR.

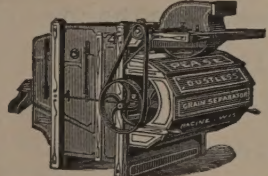
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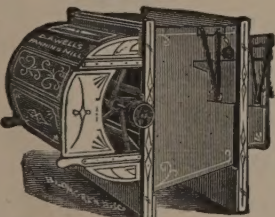
Pease Side-Shake Mill for Warehouse.



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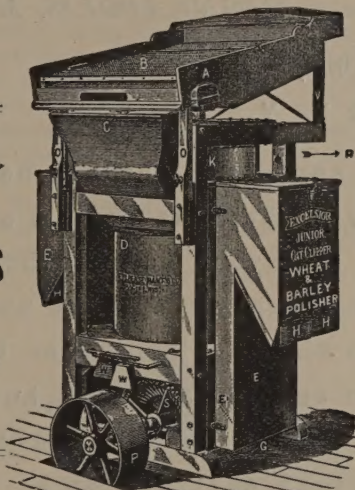


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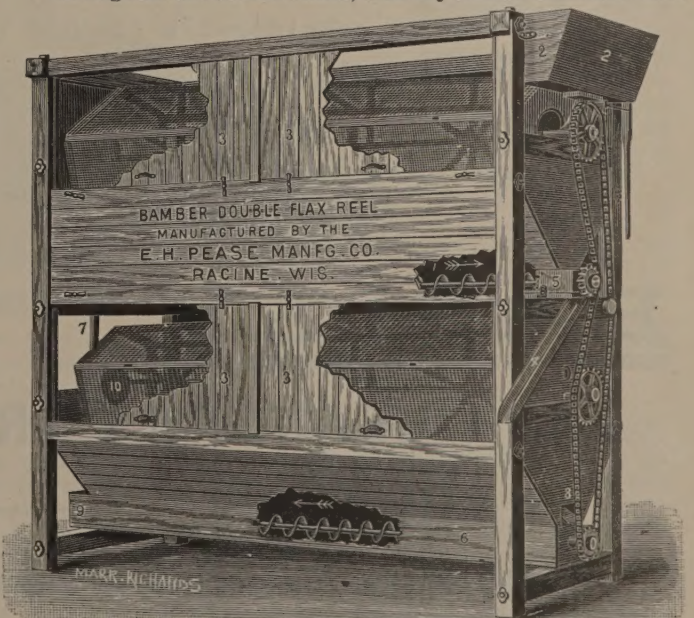
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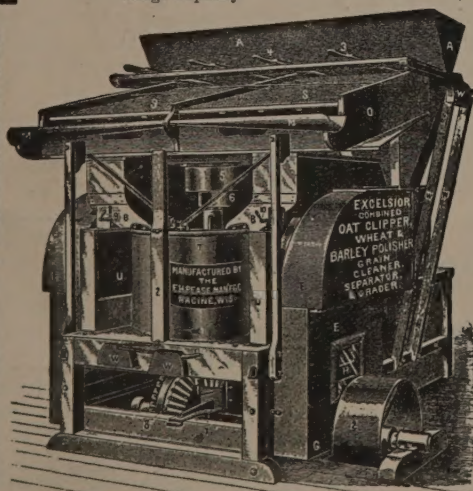
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